THE IMPORTANCE OF MUSIC IN ADOLESCENT LIFE:
THE RELATIONSHIP BETWEEN MUSIC PREFERENCE,
VALUES, ATTITUDES, AND BEHAVIORS

By

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The purpose of this study was to determine whether significant differences exist between fans of popular rock (PR) and college/alternative (CA) music and whether fans' global commitment (GC) to their preferred style of music interacts with music preference (MP) such that differences in values, attitudes, and behaviors are only significant when GC is high. Twenty different values were assessed using Super and Nevill's Values Scale. Attitudes assessed included 1) attitudes toward women using Burt's Sex–Role Stereotyping Scale and Lonsway and Fitzgerald's Rape Myth Scale and 2) permissive attitudes toward substance use using the Substance Abuse Attitudes Scale by Chappel, Veach, and Krug and a 10-item Attitudes Toward Substances Scale constructed by the author. Behaviors assessed included 1) sexually coercive behavior using the Sexual Experiences Survey by Koss and Oros and 2) substance use using a 10-item Substance Use Scale constructed by the author. MP and GC were assessed using the Music Preference Questionnaire constructed by the author. Sensation seeking was included as a covariate for some dependent variables using a 10–item Sensation Seeking Scale by Madsen, Das, Bogen, and Grossman. Significant MP differences were found for 1) the

values of Ability Utilization, Achievement, Advancement, Authority, Cultural Identity, Economics, Prestige, Social Interaction, and Social Relations, 2) sex-role stereotyping, 3) attitudes toward marijuana and all drugs, and 4) use of tobacco, marijuana, hallucinogens, psychedelics, legal, illegal, and all drugs. PR fans were found to score higher than CA fans on the listed values and on the SRS. CA fans were found to be more permissive toward the listed substances and to use the listed substances more than PR fans. Significant MP × GC interaction effects were found for the value of Prestige and the use of alcohol and heroin. All three interaction effects found CA fans' valuing of Prestige and use of alcohol and heroin remaining fairly constant across GC whereas popular rock fans show a sharp increases in valuing Prestige and use of alcohol and heroin as their GC increases. The conclusions and limitations of this study are discussed as are implications for future research.

CHAPTER 1
INTRODUCTION

Social scientists widely acknowledge the importance of music to youth culture (Christenson & Roberts, 1990; Frith, 1981; Roe, 1987). This connection is also obvious to the general public in phenomenon such as MTV, the advent of rock 'n' roll in the '50s, the hippie movement in the '60s and early '70s, and, of course, "Beatlemania." In fact, the scenario of a teenager holed up in his room with music blaring has become a cliché. The available research on adolescent music consumption confirms this image of music forming a "soundtrack" to the daily lives of youth (Lull, 1987).

Research on adolescents' attitudes toward music confirms the importance of music to youth. Leming (1987) reports that 46% of a sample of 11– to 15–year–olds said music was "very important" to them and an additional 47% said that it was "somewhat important." Only 7% of these adolescents said music was "not important at all."

The importance of music to youth is also evident in their behavior—their reported consumption of music media. Popular music plays an important role in the lives of children throughout their childhood. Their consumption of popular music typically accelerates about 3rd or 4th grade and peaks in late high school or college. Television, in contrast, rises to a peak in early adolescence (about age 12). Over the course of high school, adolescents begin to spend more time listening to music at the expense of watching TV (Christenson & Roberts, 1990; Larson & Kubey, 1983; Larson, Kubey, & Colletti, 1989). For example, Christenson and Roberts (1990) surveyed a largely middle–class, Caucasian sample of California teenagers and found that until 9th grade, both TV viewing and music listening increased almost equally with a slight preference for

music listening. By eleventh grade, TV viewing had declined by almost 30 minutes whereas music consumption remained consistent.

Just how much do they listen? In a review of the literature, Christenson and Roberts (1990) concluded that by late adolescence the average teenager listens to between four and five hours of all music media every day. The primary source of music for adolescents is the radio, occupying almost 50% of all music listening throughout adolescence. Listening to CDs or tapes makes up another significant source of music, but the extent of this use is often highly dependent on available economic resources. In Christenson and Roberts' (1990) sample, consumption of CDs and tapes gradually increased from 34% of total music listening in 7th grade to 41% by 11th grade, which likely reflects the increasing financial resources of employed high school students. Music videos are the least important source of music, consuming less time and, like TV, declining steadily throughout late adolescence as audio-only music consumption increases. In Christenson and Roberts' (1990) sample, viewing music videos decreased from 22% of total music listening in 7th grade to 11% by 11th grade. Keith Roe concludes, "it is becoming increasingly difficult to escape the conclusion, in terms of both the sheer amount of time devoted to it and the meanings it assumes, that it is music, not television, that is the most important medium for adolescents" (Roe, 1987, pp. 215 – 16).

The Impact of Music

If music is indeed the most important medium for adolescents, anyone interested in adolescents (e.g., psychologists, counselors, educators, parents) should be concerned about the impact of music. At the same time, the available literature is very sketchy. There are large gaps in our knowledge. Consequently, developing a broad theory based on the available research ends up being largely conjecture. However, the data that are available testify to the powerful impact music has on youth.

Often, when a complex phenomenon such as music is studied, theorists tend to focus on a particular element or component of the phenomenon. In the study of music, this reductionism is often based on assumptions about which component is the most potent. First, when MTV started in 1981, music videos became the focus of attention and a flurry of studies looking at music videos were soon published (e.g., Sherman & Dominick, 1986; Greeson & Williams, 1986; Zillman & Mundorf, 1987). Soon a considerable public reaction to the lyrical content of the songs launched more studies looking at the impact of music lyrics (e.g., Norwood, 1987; St. Lawrence & Joiner, 1991). Other studies have focused more on the music itself as the most potent component (Kruse, 1994). Whereas research in these three areas has not demonstrated the exclusive importance of one component, the research has provided important information about the impact of music.

The Impact of Music Videos

Music videos receive a great deal of attention by researchers because videos combine music, which by itself is not seen as compelling, with TV, which is generally perceived by researchers and the general public as the most potent form of mass communication. However, as already noted above, music videos are not a significant source of music for adolescents nor do they receive a significant amount of adolescent's attention, particularly in late adolescence (Christenson & Roberts, 1990; Larson & Kubey, 1983; Larson, Kubey, & Colletti, 1989). However, that videos are not a major source of music media does not mean that they are irrelevant and without impact.

In terms of content, Sherman and Dominick (1986) found that more than half of all videos contained some form of violence and almost 75 percent contained sexual intimacy in some form. Other research has demonstrated that this sexual and violent content affects both the participants' appreciation of the video (Hansen & Hansen, 1990b;

Zillman & Mundorf, 1987) and the participant's attitudes toward women (Peterson & Pfost, 1989). Videos have also proved to be effective at priming sex–role stereotypic event schemas (Hansen, 1989; Hansen & Hansen, 1988), eliminating participant's disapproval of confederates performing defiant behaviors (Hansen & Hansen, 1990a), and altering attitudes toward premarital sex and peer violence (Greeson & Williams, 1986). This latter study is particularly relevant as the authors found that exposure to only 30 minutes of videos recorded either randomly from MTV or selected specifically for their reference to sex, violence or antiestablishment themes resulted in greater approval of premarital sex. The above research makes it clear that music videos have an impact, but because of the small role they play in adolescent's music use, videos by themselves cannot account for the full impact of music media.

The Impact of Lyrics

Music lyrics are also a popular target of concern by parents, public policy administrators, and social scientists. However, like video, research about how adolescents use and interpret lyrics suggest that lyrics themselves are not the most important component of music. In fact, few adolescents report that they pay much attention to the lyrics or that the lyrics are an important reason why they listen to or like music (Gantz, Gartenberg, Pearson, & Schiller, 1978; Rosenbaum & Prinsky, 1987).

In addition, research suggests that adolescents are largely incapable of "correctly" interpreting song lyrics (Leming, 1987; Greenfield et al., 1987; Rosenbaum & Prinsky, 1987). Often adolescents do not understand—nor are they even aware of—the objectionable material that is the cause of adults' reactions to music and music lyrics. However, some adolescents do understand these themes and, as Christenson and Roberts (1990) point out, it is unlikely that an adolescent's interpretation of lyrics is random. They argue that an adolescent's attention to a particular theme or interpretation of a song

is directly related to the adolescent's psychological and developmental variables. Still the impact of the lyrics does not account for the full impact of music media.

The Impact of Music Alone

The final component that has received some attention in the literature is the impact of the music itself, without reference to lyrics or visuals. Very few studies have addressed this topic specifically, but implications from other studies (e.g., Hansen & Hansen, 1990b; Peretti & Zweifel, 1990;1983) confirm the obvious: that the music itself is central to the impact of music. The importance of music alone is also confirmed in the reports of adolescents regarding why they listen to music or why they like their favorite song, with many stating they just "like the beat" (Rosenbaum & Prinsky, 1987). One study that tried to assess the impact of the music only found that instrumental heavy metal rock music had the same impact on attitudes toward women as sexually violent heavy metal rock music, but the impact for both was modest at best (Kruse, 1994).

Music is a Complex Stimulus

When the above studies are considered, it becomes obvious that music is not a simple stimulus that can be reduced to lyrics, visuals, musical notes, rhythms, or melodies. Nor can music be considered the sum of these factors alone. In time a particular style of music begins to embody more than just the sound and lyrics. Heavy metal rock music, for instance, is not just a style of music, but also can be interpreted as including an ideological stance (e.g., personal freedom, antiestablishment), a fashion esthetic (e.g., long–hair, black concert T–shirts), role–models (the musicians), and behavioral expectations (e.g., "head–banging," partying, substance use). James Lull (1987) vividly describes this way of understanding music:

> These cultural distinctions are important to pop music fans. The music of
> Elvis Costello might sound the same as that of Bruce Springsteen to an
> outsider, but young people know that the difference between these two

artists is something more than musical. They represent different lifestyle orientations. Costello is a major exponent of "modern" music while Springsteen is the respected spokesman for blue–collar, East Coast rock and roll. Allegiance to one or the other says something important about the listener. Some modern music fans think Bruce Springsteen is boring old news. Some blue–collar rockers regard Costello as a lightweight, new wave wimp. These are not casual distinctions, and some members of these two camps would rather die than be associated with the other, even though their parents and other naive observers may not be able to tell the difference in their styles of music. (pp. 144 – 5)

Notice that the uninitiated (e.g., adults, counselors, parents, and social scientists) do not recognize the glaring differences between the music genres, differences that are sometimes embodied more in the nonmusical characteristics than in the sound. However, this understanding of music as a complex stimulus is crucial to understanding the function of music in youth culture. In order to discover the impact of music, researchers need to understand that music is consumed holistically. In other words, listeners do not analyze the independent contribution of the rhythm, the melody, the harmonic qualities, the lyrical content, the musician's social presence, and the values, attitudes, behaviors, and lifestyle implied in the performance. When listeners hear a song, they are responding to the whole stimulus. Therefore, when considering the impact of music, one must consider the entire stimulus, musical and nonmusical.

"Massive" vs. "Conditional" Effects

When the impact of media in general is addressed, the effect expected is often cast in terms of a massive, direct, and negative effect (e.g., Postman, 1982; Winn, 1985) These same fears have been applied to music media, most prominently—and successfully—by Parents' Music Resource Center (Norwood, 1987). The basic assumption seems to be that "mass" media must have a "massive" effect on "masses" of people. It is as if the audience is passive, bringing nothing to the encounter—the "message" of the media is communicated, received, and will have a specific, universal

effect. It is assumed in this view that the listeners simply respond, with no reference to their own personal dynamics.

The empirical literature on mass media effects does not support this view of "massive" effects (McGuire, 1986; Christenson & Roberts, 1990), but rather suggests a more modest impact of mass media. However, this does not mean that there is no effect or that smaller effects are not important. The music research briefly outlined above, although inconsistent with "massive" effects, clearly indicates that music affects people and that these effects can be of the utmost importance. For example, if heavy metal songs with themes of suicide influence only 1 or 2% of a high school class of 600 to commit suicide, the deaths of those 6 to 12 adolescents will have a profound effect on that school and cause a great deal of concern in the community.

The rejection of "massive" effects also raises other questions about the impact of media. If mass media affect only a limited number of people who are exposed to them, there must be mediating factors. A recent development in mass communication research deals specifically with this issue (McLeod & Reeves, 1980; Roberts & Maccoby, 1985). Called the "conditional approach," this approach assumes the consumer's response is dependent on the psychological, social, and cultural characteristics of that consumer.

Applied specifically to music, this conditional approach may cause even greater concern about the impact of music. For instance, the literature suggests that even though adolescents' comprehension of music lyrics is often inaccurate, it is not random. Christenson and Roberts (1990) theorize that adolescents' misinterpretations are systematic and correspond to their developmental level and the conflicts associated with that level:

> Nor does it mean that we shouldn't be concerned about teenagers' understanding of the various sexually explicit, violent, or suicidal lyrics that elicit comment from adult critics. Obviously, some young teenagers

do apprehend some songs in these terms, at least some of the time. . . . And there is reason to suspect that the youngsters most likely to comprehend the more horrific lyrics in terms of their manifest content might be just those who are more at risk. If adolescents' interpretation of information is sensitive to current needs and activities, one might expect those who are becoming sexually active to be most likely to concentrate on the sexual content of lyrics, those who are considering experimenting with drugs may be most likely to attend to drug–oriented lyrics, those who are highly alienated or depressed to be most likely to focus on songs about suicide (pp. 52 – 54).

Thompson, Pingree, Hawkins, and Draves's (1989) study validates this concern when they found that high school girls interpreted and processed Madonna's "Papa Don't Preach" video differently depending on whether they had had prior "pregnancy experiences" and whether their fathers stressed social harmony in interpersonal relationships or exploring ideas at the possible expense of social harmony.

Music as a Cause

Understanding that the impact of music is dependent on an individual's psychological and developmental level answers some questions about adolescent music subcultures. Nearly everyone, including social scientists and the general public, agrees that music is important to youth. But more than being important, many theorists assert that music is used in the youth culture to define and differentiate between subcultures (e.g., Frith, 1981; Roe, 1990; Christenson & Roberts, 1990; Lull, 1987). One can witness music subcultures on the streets and campuses of America every day.

But all adolescents are not impacted by music in the same way. Not all youths have a meaningful identification with a particular style of music. Many listeners have a wide variety of tastes. Even within a particular music preference, there is a considerable amount of variability in how each individual interacts with the music and the subculture that surrounds it. In other words, not all adolescents who prefer punk–rock have a pink–spiked mohawk; not all adolescents who prefer heavy metal have long hair; not all

adolescents who prefer college/alternative dye their hair black and put in an eyebrow ring. The conditional approach to media effects can account for this variability. The goal then becomes identifying the psychological or developmental factors that predict whether music will have a profound effect on a given adolescent. The question becomes, "Under what conditions does music act as an agent of cause in values, attitudes, and behaviors?"

At one level, asking this question is premature because it is not altogether clear from the literature if music *ever* acts as an agent of cause in adolescent behavior. Studies often find relationships between music preference and other behaviors. However, the fact that listening to music is inversely correlated with academic performance (Larson & Kubey, 1983) or that adolescents who were alienated from mainstream school life more often prefer heavy metal rock music (Tanner, 1981) or that substance abuse is positively correlated with use of heavy metal rock music (King, 1988) does not mean that music is the cause. In fact, as Keith Roe (1990, 1987) argues, music preference may just be an effect, a superficial indicator of other psychological, sociological, and cultural processes at work in the life of the adolescent. With respect to these correlational studies, one valid explanation is that students who do not do well in school become alienated and become interested in other activities that are more gratifying such as substance use or listening to heavy metal rock music.

But the stance that music is not a causative factor at all is difficult to reconcile with the research on the impact of music (e.g., Greeson & Williams, 1986; Hansen & Hansen, 1989, 1990a, 1990b, 1991; Kruse 1994), analyses of how youth use music (Frith, 1981; Lull, 1987; Grossberg, 1987), and the general intuitive sense of the importance of music to youth. However, researchers must not be deceived into thinking the choice is between "massive" effects and no effects. There may be conditional effects. In other words, music may act as an agent of cause for certain subgroups.

Christenson and Roberts (1990) argue this position most eloquently. They maintain that while music may not *cause* adolescent values, attitudes, and behaviors in most cases, there may be subgroups in which music can act as an agent of cause. For example, heavy metal fans seem to be an at–risk group (Tanner, 1981; King, 1988) who may be more susceptible to the sexually violent, rebellious, anti–establishment messages of heavy metal rock music. In addition, heavy metal rock fans also report being more familiar with the content and meaning of these lyrics (Wass, Raup, Cerullo, Martel, et al., 1988 – 89), which increases the danger. Christenson and Roberts (1990) stated the following regarding the potential influence of music:

> Yet we have hinted at some areas in which the impact of music in social settings and social groups might be problematic. Certain types of music do stand for rebellion and alienation, do represent antisocial philosophies. There is the possibility that the message of this kind of music (which is as much in the sound and the images of the artists as in the lyrics) may solidify certain subgroups in adolescent culture and articulate values and feelings for their members.

> We say *certain* subgroups because most teens who listen, for example, to heavy metal are not alienated or at risk. . . . For others, though, the preference for heavy metal is more than just a "taste." It is an identity, a source of group cohesion, a life philosophy. For these listeners, there is the strong possibility that a certain type of music, once adopted by their group, may begin to act as a source of information, values, and even behavior (pp. 60 – 61).

However, Christenson and Roberts (1990) were able to find only one study in their review of the literature that relates to this hypothesis. This study, by Roe (1984), offers limited support for the contention that music can act as a cause of adolescent attitudes and behavior. In a longitudinal study of Swedish youth, Roe found that adolescents who were strongly interested in pop music at the age of 11 later were more oriented toward their peers and less oriented toward their parents than were adolescents who were not interested in pop music at an early age. This study suggests that the music

(or the messages contained in the music and in the subculture surrounding the music) may have accelerated these adolescents' separation from their parents. A similar result may occur in heavy metal subcultures in which adolescents with a tendency toward delinquent behavior adopt heavy metal rock as their music. By doing this they gain a group identity; however, they also are exposed to the sexually violent, antisocial themes of the music, which may lead them into drug addiction, antisocial behaviors, and acts of violence against women.

Christenson and Roberts (1990) hypothesized that music can act as a source of information, values, and behaviors for those listeners for whom their music preference is more than just a "taste." In other words, music is not expected to act as a primary source of information, values, and behaviors for all adolescents, but when an adolescent is deeply committed to a particular style of music he or she is more likely to internalize the values, attitudes, and behaviors found within that music subculture. This study tests Christenson and Roberts' (1990) hypothesis to determine if (a) there is a significant relationship between preference for musical styles and values, attitudes, and behaviors and (b) differences in values, attitudes, and behaviors between music preference groups will only be statistically significant when commitment is high.

CHAPTER 2
REVIEW OF THE LITERATURE

Christenson and Roberts' (1990) hypothesis involves many variables. This chapter begins by identifying and defining the two independent variables of music preference and global commitment. These variable specify which style of music the listener favors and whether this preference is "more than just a 'taste.'" To provide a broad test of Christenson and Roberts' (1990) hypothesis, dependent variables will be included from three distinct domains: 1) values, 2) attitudes, and 3) behaviors. There is a natural progression here from internal variables to external variables, beginning with values, which are deeply held ideas about what is important in life, to attitudes, which are often more superficial and malleable by the influences of society, to behaviors, which provide objective, external evidence of these internal states. The attitude and behavior variables have been selected based on a common theme whereby these variables will serve to verify one another. In other words, attitudes toward substances will be paired with an assessment of substance use so that if attitude differences are found, it can be determined if these attitude differences relate to behavioral differences. The attitudinal and behavioral variables have been chosen based on issues relevant to both adolescent life and music based on the available literature. These dependent variables will focus on attitudes toward women and sexually coercive behavior and on attitudes and behavior as the relate to substance use.

Independent Variables

Music Preference

       To test adequately Christenson and Roberts' (1990) hypothesis that music can become a source of information, values and behaviors in some cases, two independent variables need to be considered. The first is music preference itself. Christenson and Peterson (1988) found that adolescents could identify and differentiate among 26 distinct musical styles. Clearly there is a wide variety of music preferences available. However, a music preference must be sufficiently distinct from all other music styles and have a sufficiently large following to provide enough data to make a valid test of whether adolescents who prefer this style of music are different in their behavior and in the values and attitudes they hold and whether this difference is related to their commitment to this preferred style of music. In short, to test Christenson and Roberts' (1990) hypothesis properly, it will be necessary to group related music styles together to form a smaller number of general but distinct groups.

       Kruse (1994) used five general groups to classify music preference: popular rock, college/alternative, heavy metal rock, country/folk, and classical/jazz. This grouping, although reducing the 26 music styles identified by Christenson and Peterson (1988) to a smaller number, would prove unsatisfactory for the present study on two counts. First, out of a sample of 200 male undergraduates at the University of Florida, only 8 (4%) expressed a preference for classical/jazz and an additional 7 (4%) expressed a preference for country/folk (pretesting data from the University of Florida Psychology Department participant pool for the Fall semester of 1992 confirmed the small percentage of University of Florida undergraduate males who prefer country/folk and classical/jazz music). Clearly these categories, although representing very distinct musical styles, do not have sufficient support in the population to be used in this study to make a valid test

of the hypothesis and will therefore not be included in the analysis. The remaining three music preference groups did receive sufficient endorsement by Kruse's sample with 66 (33%) preferring popular rock, 95 (48%) preferring college/alternative, and 24 (12%) preferring heavy metal.

The second problem with the particular grouping of music preference used by Kruse (1994) is that rap was conceptually included in the popular rock group. This grouping, although appropriate for the prior study, is not consistent with the intent of the present study. In particular, rap represents a musical style and musical culture very distinct from popular rock and so it must be treated as a separate music style in the present study. Conceptually, rap is an important music category because it, like heavy metal rock music, has come under considerable attack by parents, civic groups, and social scientists for its controversial, violent, and misogynistic themes of gangster behavior, selling drugs, rape, and killing police officers. However, whether rap music will be endorsed as a music preference by sufficient numbers of this sample is in question. Existing pretesting data from the University of Florida Psychology Department participant pool for the Fall semester of 1992 indicate that only 9% of a sample of 647 undergraduate males indicated a preference for rap music. Whether rap music is included in the present study is entirely dependent on the number of participants who endorse it as their music preference.

It is also possible that other music styles could enter the analysis if enough participants identify it as their preferred style. Again, based on the previous data from Kruse (1994) and pretesting data from the University of Florida Psychology participant pool for 1992, it is unlikely that any other music style will satisfy this criterion. Therefore, the music styles that are likely to be included as independent variables in the analysis are popular rock, college/alternative, and heavy metal rock. Participants who

indicate a different music preference that is not endorsed by at least 10% of the sample will be excluded from the analysis.

<u>Global Commitment</u>

The second independent variable for this study is the adolescent's reported global commitment to his or her preferred style of music. The global commitment variable will be used to predict when music preference will become a particularly salient variable for distinguishing between adolescents based on their values, attitudes, and behaviors. In many ways global commitment is an obvious predictor variable. Anyone predicting which of two individuals is more likely to be influenced by music would certainly expect the individual who is committed to the music—who has greater exposure (e.g., listens more), more exclusive exposure (e.g., prefers exclusively the music in question), actively seeks out the music (e.g., purchases CDs), publicly identifies with the music (e.g., wears concert T–shirts), personally identifies with the music (e.g., fantasizes about becoming a musician), and identifies his/her music preference as an important descriptor of him/herself—to be more open to and receptive of the messages communicated through the complex stimulus of music.

It also becomes obvious that this commitment variable must be a "global" variable because there are many ways adolescents can commit themselves to a music preference. Therefore, this global commitment variable is broadly defined and must contain multiple measures. For example, purchasing tapes or CDs is an indicator of commitment to a music preference, but that an adolescent does not purchase tapes or CDs may simply mean he or she lacks the disposable income necessary to buy them. Consequently, global commitment will include such variables as the exclusiveness of music preference, the amount of listening, percentage of friends who also prefer the style, tape or CDs purchases, concert attendance, and self–reported identification with the music style, etc.

Making global commitment a predictor variable is also consistent with Christenson and Roberts' (1990) hypothesis. Their concern is that "a certain type of music, *once adopted by their group,* may begin to act as a source of information, values, and even behavior" (Christenson & Roberts, 1990, p. 61). The current project measures the extent to which a particular music style is adopted by an individual and determines whether individuals who are highly committed to their favorite music have different values, attitudes, and behaviors than individuals who are not as committed or who prefer another style of music.

<u>Dependent Variables</u>

The dependent variables in the present study include both *a priori* variables, in which differences are expected on theoretical grounds, and exploratory variables, which are salient in adolescent culture but whose relationship to music and music preference is unknown. The dependent variables are grouped into three classes of variables: values, attitudes, and behaviors.

<u>Values</u>

Values are long–standing beliefs that certain ways of acting are more personally or socially desirable than are other ways. Personal values represent what an individual wants or considers to be good or important. Values are often categorized as either intrinsic, that is inherent in the activity itself, or extrinsic, the result of the activity. An example of an intrinsic value would be aesthetics, where a music listener may directly experience the artistic beauty of the music. An extrinsic value would include cultural identity, where the listener is able to deepen a connection to his or her own culture by listening to music. Values are central to the way individuals understand their world and are probably the deepest level at which music is expected to have an impact. If music is

found to have a significant impact on values, then the influence of music is penetrating and pervasive.

The Values Scale (VS; Super & Nevill, 1986) will be used to assess values. The US version of the VS includes 21 scales in 106 items measuring both intrinsic and extrinsic values. The values assessed by the VS include Ability Utilization, Achievement, Advancement, Aesthetics, Altruism, Authority, Autonomy, Creativity, Cultural Identity, Economic Rewards, Economic Security, Life Style, Personal Development, Physical Activity, Physical Prowess, Prestige, Risk, Social Interaction, Social Relations, Variety, and Working Conditions. The VS, although developed as a career assessment instrument, includes both work and general values, providing a fairly comprehensive list of values. The VS was developed by a multinational team of researchers as part of the Work Importance Study. As a result the VS is a carefully constructed, psychometrically sound instrument that is available in nine languages (Nevill & Super, 1989; Nevill & Kruse, 1996).

Šverko (1995) completed a cross–national factor analysis of the VS using data collected as part of the WIS. International scoring was used that includes only the first 18 scales listed above (Economic Rewards and Economic Security are combined as Economics) and only the three items per scale that were adopted by all countries in the WIS. This sample included 18,318 participants from 10 countries, with some countries providing separate samples for secondary school, higher education, and adults. Factor analysis of this pooled sample yielded a five–factor structure. The first factor, Utilitarian Orientation, included Economics, Advancement, Prestige, Authority, and Achievement and focuses on extrinsic values that stress the importance of economic conditions and material career progress. The second factor is Orientation Toward Self–Actualization and primarily includes Ability Utilization, Personal Development, and Altruism, with some

samples including salient loadings on Achievement, Aesthetics, and Creativity. The third factor, Individualistic Orientation, is primarily made up of Life–Style and Autonomy with Creativity and Variety included in some samples. The fourth factor is Social Orientation and is defined by Social Interaction and Social Relations. Some samples' loadings on this factor also include Variety and Altruism. The fifth factor, which Šverko labeled Adventurous Orientation, primarily includes Risk with some samples also loading Physical Activity and Authority on this factor.

There are no available data on specific value differences between different music styles and subcultures. As a result, although a relationship between music and values is theoretically predicted, the exact nature of this relationship is speculative. However, the relationship between music and values need not be entirely exploratory, as some reasonable predictions can be made based on an understanding of the different music styles and subcultures. For example, preference for heavy metal rock music is expected to be positively related to an Adventurous Orientation whereas preference for college/alternative is expected to be positively related to an Individualistic Orientation.

Attitudes

Attitudes toward women

The relationship between attitudes toward women and music has received considerable attention in the literature (St. Lawrence & Joiner, 1991; Peterson & Pfost, 1989). In particular, Kruse (1994) found that although heavy metal rock music with or without lyrics negatively influences attitudes toward women, a preference for heavy metal music is associated with *less* restrictive attitudes toward women. In fact the most restrictive attitudes were associated with a preference for popular rock and country/folk music. These results are confusing, somewhat contradictory, and make it difficult to predict how different music styles might affect listener's attitudes toward women. It is

expected that the present study will help clarify this important relationship. To this end, attitudes toward women are measured using two scales: the Sex–role Stereotyping Scale (SRS; Burt, 1980), and Rape Myth Scale (RMS; Lonsway & Fitzgerald, 1995), which is a revision of Burt's (1980) Rape Myth Acceptance Scale that attempts to correct both theoretical and psychometric weaknesses of the Burt scale. The SRS will allow a replication of Kruse's (1994) work and helps clarify the relationship between music preference and sex–role stereotyping, as well as demonstrate the role of global commitment in this relationship. The RMS is being included because a moderate relationship exists between sex–role stereotyping and the acceptance of rape myths (Burt, 1980). The RMS will help to extend the findings of Kruse (1994) by determining if the relationship between attitudes toward women and music preference is limited to sex–role stereotyping or if the relationship extends to attitudes toward women that are of greater concern to social scientists.

Substance use

Attitudes toward substance use are another important area of concern with respect to adolescents and music (Christenson & Roberts, 1990; King, 1988). The connection between music and drug use is most clearly illustrated in the cliché "sex, drugs, and rock 'n' roll." Because of this relationship, it is expected that music, particularly certain music styles, will have a strong relationship with adolescents' attitudes toward drug use, if not their actual behavior (see below for a discussion of drug use). In general, preferences for heavy metal and college/alternative music are expected to be more strongly associated with permissive attitudes toward substance use because these music cultures most openly endorse drug use.

It also will be important when assessing drug use attitudes to differentiate between different substances. Alcohol and tobacco should be about equally endorsed by fans of

all music styles because they are legal substances that do not form a substantial theme in the music or music cultures. Heavy metal fans are expected to be accepting of all drugs including hard drugs and narcotics. College/alternative fans may have a profile quite similar to heavy metal rock, but college/alternative fans are more likely to favor psychedelics, hallucinogens, and heroin, which are substances often associated with this music culture.

Behaviors

Sexual coercion

Music is expected to be related to more than just attitudes. A relationship between music preference and adolescent behavior should also be found. Sexual coercion as a behavior is being included because it is the explicitly sexually violent themes in music that draw the greatest criticism from the public (Norwood, 1987) and social scientists (e.g., St. Lawrence & Joiner, 1991). Sexually coercive behavior in males also is expected to follow from high sex–role stereotyping and greater acceptance of rape myths.

Researchers rarely consider women as perpetrators of sexual coercion or men as victims, but the research that is available suggests that this dynamic is not as unusual as it would seem to be at first glance. For example, Johnson and Johnson (1994) found that 34% of a sample of 204 college men reported incidents of pressured or forced sexual touching or intercourse since age 16 years, with 30% of these incidents involving a female perpetrator or perpetrators of both sexes. Lottes (1991) also found substantial proportions of male undergraduates reporting that women had tried to have sex with them through nonphysical coercive strategies. In another study, McConaghy, Zamir, and Manicavasagar (1993) found that 6% of a sample of 51 female medical students reported being so aroused that they could not stop when their partner did not want intercourse and 13% of the sample of 66 male medical students reported having intercourse against their

will. As a result of these studies, females also will be asked to report their sexually coercive behaviors as well.

Regarding sexual coercion, it is expected that heavy metal and rap music listeners (heavy metal and rap most often contain sexually violent/coercive lyrics) will report a higher incidence of sexual violence than will either popular rock or college/alternative listeners.

Substance use

Again the obvious link between music and drugs clearly implies that music preference should be related to substance use (King, 1988). It is expected that participants who prefer heavy metal rock or college/alternative music will report the most frequent drug use. Drug use will be assessed by asking participants how frequently they use different classes of drugs on a scale from "never" to "several times daily."

As noted above, different music styles also should be more strongly associated with certain classes of drugs. Again, fans of all music styles should show roughly equivalent use of alcohol and tobacco. Heavy metal rock and college/alternative fans are expected to report more frequent use of illegal drugs with college/alternative fans showing a preference for psychedelics, hallucinogens, and heroin.

Sensation Seeking

There are other variables that may be of interest in the present study. One such variable is Sensation Seeking (Zuckerman, 1978), which has been associated with a preference for hard rock and heavy metal rock music (Arnett, 1992, 1991). Sensation seeking has been associated with other high–risk/reckless behaviors including drug use, promiscuous sex, unprotected sex, driving while intoxicated, shoplifting, and vandalism (Arnett, 1992, 1991). The association between heavy metal, high–risk behaviors, and sensation seeking could potentially confound the results of this study. In particular, if

sensation seeking is correlated with both heavy metal rock music and other high risk behaviors, then the relationship between heavy metal rock music and high risk behaviors might be explained by sensation seeking. However, if the relationship between heavy metal rock music and these high risk behaviors is independent of sensation seeking, then this leaves open the possibility that a preference for heavy metal rock music influences these behaviors. As a result, sensation seeking will need to be controlled for in all analyses in this study.

Summary

This study seeks to test whether music can begin to act as a source of information, values, and behaviors for certain fans whose lives are specifically oriented around their preferred style of music. To test this hypothesis, the participants' music preference and their global commitment to the music will be assessed. This study also will measure the participants' values, attitudes toward women, acceptance of rape myths, attitudes toward substances, frequency of sexually coercive behavior, and frequency of substance use. This study is less concerned about the specific differences between music preference groups in terms of their values, attitudes, and behaviors and is more interested in the general relationship between music preference and global commitment and its significance across the domains of values, attitudes, and behaviors. To this end, the following hypotheses were made regarding the dependent variables in this study.

Hypotheses

General Hypotheses

A. Music preference, as indicated by the participant's self–reported preference from among specified styles of music (i.e., heavy metal rock, popular rock, college/alternative, and rap), and global commitment to the preferred style of music will be significantly associated with values, attitudes, and behaviors.

B.   Music preference and global commitment to that music preference as measured by the Music Preference Questionnaire will interact such that differences in values, attitudes, and behaviors between music preference groups will only be statistically significant when commitment is high.

Specific Hypotheses

Values

1.   On the Utilitarian Orientation factor of the Values Scale (Super & Nevill, 1986), music preference (MP) and global commitment (GC) will interact such that popular rock fans will place more importance on this factor (i.e., score higher) as their GC increases whereas college/alternative fans will place less importance on this factor (i.e., score lower) as their GC increases.

2.   On the Orientation Toward Self–Actualization factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that college/alternative fans will place more importance on this factor (i.e., score higher) as their GC increases whereas heavy metal rock fans will place less importance on this factor (i.e., score lower) as their GC increases.

3.   On the Individualistic Orientation factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that college/alternative fans will place more importance on this factor (i.e., score higher) as their GC increases whereas popular rock fans will place less importance on this factor (i.e., score lower) as their GC increases.

4.   On the Social Orientation factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that popular rock fans will place more importance on this factor (i.e., score higher) as their GC increases whereas

heavy metal rock fans will place less importance on this factor (i.e., score lower) as their GC increases.

5. On the Adventurous Orientation factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that heavy metal rock and college/alternative fans will place more importance on this factor (i.e., score higher) as their GC increases whereas popular rock fans will place less importance on this factor (i.e., score lower) as their GC increases.

Attitudes

6. On the Sex–Role Stereotyping Scale (Burt, 1980), MP and GC will interact such that popular rock fans will be more sex–role stereotyped (i.e., score higher) as their GC increases whereas college/alternative fans will be less sex–role stereotyped (i.e., score lower) as their GC increases.

7. On the Rape Myth Scale (Lonsway & Fitzgerald, 1995), MP and GC will interact such that heavy metal rock fans will be more accepting of rape myths (i.e., score higher) as their GC increases whereas college/alternative fans will be less accepting of rape myths (i.e., score lower) as their GC increases.

8. Permissive attitudes toward tobacco and alcohol will be equal for all music preference groups. Preference for college/alternative and heavy metal rock will be associated with more permissive attitudes toward illegal drug use. College/alternative and heavy metal rock fans' attitudes toward illegal drug use will become more permissive as their GC increases. Attitudes toward drug use will be measured by the Permissiveness Subscale from the Substance Abuse Attitudes Scale (Jenkins, Fisher, & Applegate, 1990) and by the Attitudes Toward Substances Scale (constructed by the author).

Behaviors

9. Consistent with the hypotheses regarding sex–role stereotyping and rape myth acceptance, MP and GC will interact such that heavy metal rock fans will report more sexually coercive behaviors (i.e., score higher on the Sexual Experiences Survey; Lonsway & Fitzgerald, 1995) as their GC increases whereas college/alternative fans will report fewer sexually coercive behaviors (i.e., score lower on the Sexual Experiences Survey; Lonsway & Fitzgerald, 1995) as their GC increases.

10. Preference for college/alternative and heavy metal rock will be associated with more frequent use of illegal drugs, whereas use of tobacco and alcohol use will be equal for all music preference groups. College/alternative and heavy metal rock fans' use of illegal drugs will increase as their GC increases. Substance use will be measured by the Substance Use Scale (constructed by the author).

CHAPTER 3
METHOD

<u>Participants</u>

Participants were 282 undergraduates (93 males and 189 females, 33% and 67% respectively) solicited from psychology classes at the University of Florida who volunteered to participate in this research for course credit. Undergraduate students were invited to participate in this study because music consumption remains an important part of life for youth throughout adolescence and the college years (Christenson & Roberts, 1990). The ages of the participants included 7% age 18, 23% age 19, 28% age 20, 20% age 21, 9 % age 22 and 13% age 23+. The academic class range of the participants included 5% freshman, 20% sophomores, 36% juniors, 36% seniors, 1% post–bac, and 2% graduate students. The racial makeup of the sample was 76% White, 9% Latino, 5% Asian, 8% Black, and 2% other. Data for all subjects were retained for analysis.

<u>Instruments</u>

The instruments used in the present study include the following:

1. Music preference and global commitment were both assessed using the Musical Preference Questionnaire (MPQ). The MPQ was used to gather detailed information about the participants' musical tastes and how committed they were to listening to their favorite music. Item 1 assesses music preference and the remainder of the items assess global commitment. Consistent with the discussion above, the assessment of global commitment is multi–dimensional and includes a comprehensive list of items to assess the many ways in which fans can commit themselves to a particular style of

music. This instrument was constructed by the author, and validation of this instrument, including reliability and factor analysis, is reported in the Results Section. The Musical Preference Questionnaire can be found in Appendix A.

2. Values were assessed using the Values Scale (VS; Super & Nevill, 1986), which provides scales for the following values: Ability Utilization, Achievement, Advancement, Aesthetics, Altruism, Authority, Autonomy, Creativity, Cultural Identity, Economics, Life Style, Personal Development, Physical Activity, Physical Prowess, Prestige, Risk, Social Interaction, Social Relations, Variety, and Working Conditions. In order to minimize the number of items on the battery, the cross–national scoring system was used, reducing the number of items from 106 to 60. The participants rated the importance of a value statement on a 4–point Likert scale from "of little or no importance" to "very important." The following is a sample item: "It is now or will in the future be important for me to . . . use all my knowledge and skills." Higher scores reflect placing greater importance on value. Nevill & Super (1989) report the α and test–retest reliabilities for the individual value scales to be greater than .70, with the exception of Ability Utilization, Life Style, and Personal Development. The construct validity of the VS is established by a variety of indices beginning with the use of proper inventory development procedures (Nevill & Super, 1989). Factor analysis of the VS demonstrated the expected correlations between related values (e.g. between Achievement and Personal Development) while maintaining the independence of divergent factors (Nevill & Super, 1989). Moreover, the factor structure of the VS remains consistent across cultures (Šverko, 1995)

and among different age groups within the same culture (i.e., high school, university and adult samples; Nevill & Super, 1989). Additional studies have further validated the VS by demonstrating its high correlations with other instruments that assess similar values (Nevill & Kruse, 1996). The Values Scale can be found in Appendix B.

3.   Sex–role stereotyping was assessed using the Sex–Role Stereotyping Scale (SRS; Burt, 1980). This instrument contains nine statements to which the participants must respond on a 7–point Likert scale from "strongly disagree" to "strongly agree." The following is a sample item: "A woman should never contradict her husband in public." Higher scores reflect greater endorsement of sex–role stereotyping. Burt (1980) reported a Cronbach's α of .80 for the SRS. The validity of the SRS is demonstrated by its high correlation (-.73; Check & Malamuth, 1983) with the Attitudes Toward Women Scale (Spence & Helmreich, 1972; higher scores reflect more pro–feminist attitudes) and its ability to predict attitudes and beliefs regarding sexuality and violence (Check & Malamuth, 1983). The Sex–Role Stereotyping Scale can be found in Appendix C.

4.   Rape myth acceptance was assessed using the Rape Myth Scale (RMS; Lonsway & Fitzgerald, 1995). This is a 19–item scale where the participants respond on a 7–point Likert scale from "strongly disagree" to "strongly agree." The following is a sample item: "Women tend to exaggerate how much rape affects them." Higher scores reflect greater acceptance of "attitudes and beliefs that are generally false but widely and persistently held, and that serve to deny and justify male sexual aggression against women" (Lonsway & Fitzgerald, 1995, p. 704). Lonsway and Fitzgerald (1995)

report a coefficient α of .89 (compared to a .88 Cronbach's α for the original scale; Burt, 1980) with item–to–total correlations ranging from .38 to .73. Content validity was ensured in the development of the scale by generating questions to cover all seven areas of the rape myth construct identified by Payne (1993): victim precipitation, definition of rape, male intention, victim desire–enjoyment, false charges, trivialization of the crime, and deviance of the act. Evidence for the construct validity is found in the RMS's positive correlations with measures of hostility toward women, acceptance of interpersonal violence, and adversarial sexual beliefs (Lonsway & Fitzgerald, 1995). The Rape Myth Scale can be found in Appendix D.

5. Permissive attitudes toward general drug use was assessed using the Permissiveness Subscale of the Substance Abuse Attitudes Scale (SAA; Chappel, Veach, & Krug, 1985; Jenkins, Fisher, & Applegate, 1990). The Permissiveness Subscale is a 10–item scale where the participants respond on a 7–point Likert scale from "strongly disagree" to "strongly agree." The following is a sample item: "It can be normal for a teenager to experiment with drugs." Higher scores reflect more permissive attitudes toward substance use. Jenkins, et al. (1990) validated the SAA (Chappel, et al., 1985) for a college population because the original instrument was developed for medical students and substance abuse professionals. Jenkins, et al. (1990) replicated the essential factor structure of the SAA, identifying 3 factors: (1) Stereotypes and Moralism (a synthesis of the Nonstereotypes and Nonmoralism factors identified by Chappel, et al., 1985), (2) Treatment (a synthesis of the Treatment Intervention and Treatment Optimism factors identified by Chappel, et al., 1985), and (3) Permissiveness, which shared 6

items with the Permissiveness Factor identified by Chappel, et al. (1985). Jenkins, et al. (1990) reported an Eigenvalue of 2.43 for the Permissiveness factor, which accounted for 20% of the variance. Jenkins, et al. (1990) reported Cronbach's α of .74 and a test–retest reliability over 6 weeks of .82. The Permissiveness Subscale from the Substance Abuse Attitudes Scale can be found in Appendix E.

6. Permissive attitudes toward the use of specific drugs was assessed using the Attitudes Toward Substances Scale (ATS), a 10–item constructed by the author to assess permissive attitudes toward various substances or classes of substances. The ATS was included to allow the assessment of attitudes toward specific substances and thereby determine if certain music preference groups held permissive attitudes toward specific substances. The question structure of the ATS follows the format "The use of [substance or class of substances] should not be regulated or restricted in any way." The ten questions assess the following ten substances: 1) tobacco, 2) alcohol, 3) marijuana, 4) hallucinogens, 5) designer drugs, 6) prescription drugs, 7) stimulants, 8) depressants, 9) cocaine, and 10) heroin. The following is a sample item: "The use of hallucinogens such as LSD, mushrooms, or PCP should not be regulated or restricted in any way." The participants respond on a 7–point Likert scale from "strongly disagree" to "strongly agree." This instrument was constructed by the author, and validation of this instrument, including reliability and factor analysis, is reported in the Results Section. The Attitudes Toward Substances Scale can be found in Appendix F.

7. The frequency of sexually coercive behaviors for both males and females was assessed using the Sexual Experiences Survey (SExS; Koss & Oros,

1982). The scale was originally written to assess both males' reports of sexually coercive behaviors against females and females' reports of sexually coercive behavior committed against them by males. McConaghy, Zamir, and Manicavasagar (1993) used a modified version of this scale that allowed both men and women to report how often they have engaged in sexually coercive behavior and how often they were a victim of sexually coercive behavior. In the current study, the SExS was limited to focus only on the frequency with which the participants have engaged in sexually coercive behavior. In addition, the SExS was modified from the simple yes/no format of the original form (Koss & Oros, 1982) to a 7–point Likert scale, which allowed the participants to indicate how frequently they have engaged in the target behavior from "never" to "often." The scale utilizes a dimensional view of rape, in which "rape represents an extreme behavior but one that is on a continuum with normal male behavior within the culture" (Koss & Oros, 1982, p. 455). The SExS takes into consideration the possibility that force or the threat of force may have been used in a situation, but for various reasons sexual intercourse did not occur. The scale consists of 10 statements that include a progression on the type of coercion (i.e., from verbal coercion, to threats of violence, to the use of violence) and a progression on the type of sexual acts (i.e., kissing and petting, to attempted intercourse, to oral or anal intercourse). The SExS also includes three unscored items assessing consensual sexual intercourse, having another person misinterpret the level of intimacy one desires, and having been raped. The following is a sample item: "Have you ever . . . been in a situation where you tried to get sexual intercourse with another person when he or she didn't want to by threatening

to use physical force (twisting his or her arm, holding him or her down, etc.) if he or she didn't cooperate, but for various reasons sexual intercourse did not occur?" Higher scores reflect a greater reported frequency of engaging in sexually coercive behaviors. No reliability or validity data is available for this modified SExS. However, Koss & Oros (1982) found that between 2 – 6% of their university sample of men reported using some degree of physical force or threats of physical force to coerce partners into sexual acts. The authors concluded that the instrument was a valid approach to sampling in rape research. Factor analysis of the SExS by Koss & Oros (1982) revealed one factor that accounted for 67% of the variance. The modified SExS used in this study was tested for reliability and validity and the results of these analyses, including reliability and factor analysis, is reported in the Results Section. The Sexual Experiences Survey can be found in Appendix G.

8. Substance use behavior was assessed using the Substance Use Scale, a 10–item scale constructed by the author. The participants indicated on a 7–point Likert scale (0 = "never," 6 = "several times daily") the frequency of their use of the following ten substances: 1) tobacco, 2) alcohol, 3) marijuana, 4) hallucinogens, 5) designer drugs, 6) prescription drugs, 7) stimulants, 8) depressants, 9) cocaine, and 10) heroin. The following is a sample item: "How often do you use hallucinogens such as LSD, mushrooms, or PCP?" This instrument was constructed by the author, and validation of this instrument, including reliability and factor analysis, is reported in the Results Section. The Substance Use Scale can be found in Appendix H.

9. A short (10–item) form of the Sensation Seeking Scale (SSS; Madsen, Das, Bogen, & Grossman, 1987) was used to assess sensation seeking. For each item, participants choose between two alternatives the one which best describes their personal attitude. The following is a sample item: "I would like to hitchhike across the country. OR Hitchhiking is too dangerous a way to travel." Madsen, et al. (1987) reported a test–retest reliability over a 2 month interval of .78. and a Cronbach's α of .43. Madsen, et al. (1987) reported that this short form SSS correlates .78 with the total score of the Sensation Seeking Scale, Form V (Zuckerman, 1978). The validity of the SSS is demonstrated by its high correlation with the Sensation Seeking Scale, Form V (Zuckerman, 1978), which is used in virtually all of the recent research conducted in the area of sensation seeking (Arnett, 1994). Furthermore, Madsen, et al. (1987) found that men score higher than women on the short form SSS, and that it correlates positively with alcohol use, drug use, and sexual expressiveness, but is uncorrelated with social desirability. This short form also avoids the use of dated language and questions concerning alcohol and drug use found in Form V, which Arnett (1994) identified as limitations of Form V. The Sensation Seeking Scale can be found in Appendix I.

10. A Demographic Questionnaire was used to gather information on the participants, including age, race, gender, college class, fraternity/sorority membership, SES, school background, and cultural background. The demographic questionnaire can be found in Appendix J.

Procedure

Participants were recruited for this study from psychology classes at the University of Florida. The instructor from the course was approached in order to obtain permission to sample his or her class and to make arrangements for extra credit for those students who elected to participate. The instruments were administered during the regular class time to help ensure maximum participation.

Participants were given an informed consent form to read and sign. All participants were then given two assessment batteries. These batteries are separated because Battery I required that participants bubble in their responses on an answer sheet whereas Battery II required that they write or mark their answers directly on the form.

Battery I, which took about 30 minutes to complete, includes nine scales: 1) the Demographic Survey, 2) the Values Scale, 3) the Sex–Role Stereotyping Scale, 4) the Rape Myth Scale, 5) the Sexual Experiences Survey, 6) the Substance Abuse Attitudes Scale, 7) the Attitudes Toward Substances Scale, 8) the Substance Use Scale, and 9) the Sensation Seeking Scale. Battery II, which took about 15 minutes to complete, measures two variables: 1) music preference and 2) Global Commitment to the preferred style of music.

In order to protect their confidentiality, participants were identified only by a Code Number on all instruments. After completing the assessment batteries, the participants brought their material to the experimenter where they were individually thanked for participating in the study and given a debriefing form with a full description of the study. Participants who experienced any discomfort were invited to discuss their concerns with the investigator and/or solicit counseling at UF's Counseling Center. No participant reported any discomfort as a result of participating in this study.

CHAPTER 4
RESULTS

Preliminary Analyses

Before running the main analyses to test the hypotheses, several preliminary analyses were computed. In particular, it was necessary first to determine which music preference groups would be included in the main analyses and which analyses of dependent variables would include the Sensation Seeking Scale (SSS; Madsen, et al., 1987) as a covariate. In addition, the Attitudes Toward Substances, Substance Use Scale, and the Sexual Experiences Survey (Koss & Oros, 1982) needed to be scored and analyzed to confirm the reliability and validity of the these instruments. The Music Preference Questionnaire, which included 31 write–in items, also needed to be scored and validated after Windsorizing (Marascuilo & McSweeney, 1977) and standardizing these write–in items.

Music Preference

On the MPQ, participants indicated their preferred style of music from among nine choices or wrote in their preference, if it was not listed. Table 1 displays the distribution of participants into the different music preference categories. The criterion established for including a particular music preference category in the main analysis was that the category must be endorsed by at least 10% of the sample. According to this criterion, only popular rock and college/alternative will be included in the main analysis examining the relationship between music preference and global commitment and values, attitudes and behavior. However, all music preference groups were included in the

validation of the MPQ, the Attitudes Toward Substances Scale, the Substance Use Scale, and the Sexual Experiences Survey.

Table 1 – Number of Participants in all Music Preference Categories

Music Style	Number	Percentage
Classical	2	1%
College/Alternative	82	30%
Country	20	7%
Folk	5	2%
Heavy Metal Rock	1	0%
Jazz	2	1%
New Age	6	2%
Other	54	19%
Popular Rock	86	30%
Rap	10	3%
Rhythm & Blues	14	5%

NOTE: Rhythm & Blues was not included as a standard category on the MPQ but was written in by 14 participants.

Dependent Variables

Sensation seeking as measured by the Sensation Seeking Scale (SSS; Madsen, et al., 1987) was proposed as a possible confounding variable in the relationship between music preference and the dependent variables. As a preliminary analysis, Pearson product moment correlation coefficients were computed to determine which dependent variables were significantly related to the SSS. The sample used in this analysis was limited to only participants who preferred popular rock or college/alternative ($N = 168$) because only these participants will be used in the main analysis. The statistically significant results of this analysis are provided in Table 2. An independent samples t–test was calculated to test for significant differences in SSS scores between popular rock and college/alternative fans. The results were significant ($t = -3.51$, $p < .01$) with means of

5.7 for college/alternative fans and 4.7 for popular rock fans. The fact that music preference and several of the dependent variables are correlated with the SSS justifies its inclusion as a covariate in the main analyses. Dependent variables for which the SSS was significantly correlated will include the SSS as a covariate in all analysis examining the relationship between music preference and global commitment and values, attitudes and behavior.

Table 2 – Correlation of Dependent variables with Sensation Seeking Scale

Dependent Variables	Pearson R	p Value
Music Preference	0.27	< 0.01
Values Scale		
Adventurous Orientation	0.29	< 0.01
Sex–Role Stereotyping Scale	-0.21	< 0.01
Substance Use Scale		
Sum of Illegal Drug Items	0.16	< 0.01
Sum of Alcohol and Tobacco Items	0.22	< 0.01

NOTE: The correlations between the dependent variables and the SSS are calculated using only popular rock and college/alternative fans (N=162).

Music Preference Questionnaire

The Music Preference Questionnaire (MPQ) included 36 items with 59 data points (i.e., several items included 2 or more data points) designed to measure global commitment. These data points included 3 different response methods including: 1) 31 data points for which participants wrote in a value, 2) 10 data points for which they endorsed a statement, and 3) 18 data points for which they respond to a statement on a Likert scale. The data points in which participants wrote in a value presented a variety of problems for data entry. First, participants often wrote in a range of values (e.g., "3 – 4")

for an item (e.g., "How many months has your indicated preference been your clear favorite?"). In all cases, the value entered corresponded to the highest value in the range.

A second problem was that some participants wrote in extreme values that were inconsistent with the overall sample. These extreme values may have represented a misunderstanding of the item by the participant or may have reflected accurate information. In either case the frequency distribution and variability statistics for these items were severely compromised. To correct the problems while maintaining the integrity of the data, responses for these 31 data points were Windsorized by resetting extreme values to the nearest value in the distribution of scores for that item (e.g., if an item had a consistent distribution of scores ranging from 0 to 8, scores of 12, 15, and 20 would be recoded as 8). These Windsorized scores were then converted to Z–scores to standardize them and make the values more consistent with the other Likert–scale items in the MPQ. These standardized scores were used in both reliability and factor analyses of the MPQ. The standardized scores were also used when scoring the MPQ items. However, because Z–scores can be negative, a constant of 3 was added to the Z–scores when scoring to make them positive.

A third problem encountered refers specifically to the question regarding how many months participants had preferred a particular style of music. For this item, several participants wrote in "forever," "all my life," and similar phrases indicating a long, but indefinite, time period. Other participants wrote in a value that reflected an age before 5 years old, equaled their age, or in rare cases, exceeded their age. These later cases were considered another way of indicating "forever." To assign a valid number for this "forever" group, the length item was first Windsorized, reducing the range from 0 – 25 years to 0 – 8.3 years. Next, the mean and standard deviation of the length item were computed for each age group in the sample. The value for the length item for each person

in the "forever" group was then set to the mean plus two times the standard deviation using the mean and standard deviation for their age group. In this way, an 18–year–old who indicated "forever" as the length he has preferred a specific style of music was assigned a value consistent with his age, whereas a 22–year–old was assigned a different (and higher) value consistent with other 22–year–olds in the sample.

<div align="center">Factor Analyses</div>

Substance Abuse Instruments

Attitudes toward substances

One of the instruments developed by the author is the Attitudes Toward Substances Scale (ATS), which is designed to measure permissive attitudes toward ten specific substances or classes of substances. The item structure of the ATS follows the format "The use of [substance or class of substances] should not be regulated or restricted in any way." The ten questions assess the following ten substances: 1) tobacco, 2) alcohol, 3) marijuana, 4) hallucinogens, 5) designer drugs, 6) prescription drugs, 7) stimulants, 8) depressants, 9) cocaine, and 10) heroin. The participants responded on a 7–point Likert scale (0 – 6) from "strongly disagree" to "strongly agree." A frequency analysis of the responses shows participants endorsing the full range of the Likert scale with the modal response being "strongly disagree."

Principle components factor analysis of the ATS produced the scree plot depicted in Figure 1. The scree plot graphs eigenvalues from largest to smallest. Cattell (1978) advocated using the plot to determine the number of factors to retain. The recommended decision is to retain all factors before the line dramatically changes slope from the graphically depicted sharp descent of eigenvalue magnitudes. The results of this procedure suggest that one factor should be retained. Factor loadings for all items range from .60 to .95. The α coefficient for the scale was found to be .95 with corrected item

to total correlations ranging from .92 to .57. The alcohol and tobacco items showed the weakest item to total correlations (.57 and .64 respectively) and if dropped would increase the α coefficient for the scale.
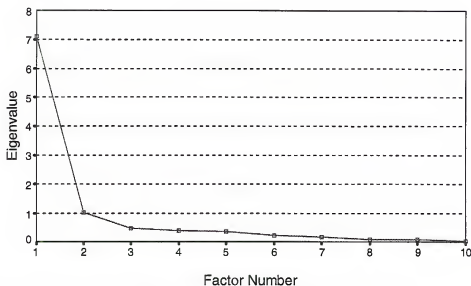
Figure 1 – Factor Scree Plot of the Attitudes Toward Substances Scale

The ATS is highly correlated with the Permissiveness Subscale from the Substance Abuse Attitudes Scale ($r = .41$) and with the Substance Use Scale ($r = .40$) discussed next. In addition, the ATS is uncorrelated with only partly similar constructs, including the Sensation Seeking Scale (Madsen, et al., 1987), the values of Autonomy, Life Style, Individualistic Orientation, Risk and Variety from the Values Scale (Super & Nevill, 1986), Age, Race, and Gender. Overall, the reliability of the ATS is clearly demonstrated and initial support for its validity exists, as well. The scale is extremely reliable with respect to internal consistency. Factor analysis yields one factor that accounts for 71% of the total variance. These results justify the retention of the ATS as a measure of permissive attitudes toward substances. Individual items from the ATS will

also be used to measure attitudes toward specific substances or groups of substances as predicted by the hypotheses.

Substance use scale

The Substance Use Scale (SUS) also was developed by the author and was designed to measure participants' frequency of use of ten specific substances or classes of substances. The question structure of the SUS follows the format "How often do you use [substance or class of substances]?" and includes the following substances: tobacco, alcohol, marijuana, hallucinogens, designer drugs, prescription drugs, stimulants, depressants, cocaine, and heroin. The participants respond on a 7–point Likert scale (0 – 6) from "never" to "several times daily." A frequency analysis of the responses shows that participants endorsed the full range of the Likert scale for alcohol, tobacco, and marijuana and a restricted range of 0 – 5 for designer drugs, 0 – 4 for prescription drugs, stimulants and depressants, and 0 – 3 for hallucinogens and heroin.

Principle components factor analysis of the SUS produced the scree plot depicted in Figure 2. The results of the scree test (Cattell, 1978) for the SUS are equivocal for one or two factors. In an attempt to find simple structure (Cattell, 1978; Kline, 1994) the one– and two–factor solutions were compared. The two factors were rotated using the Direct Oblimin method, which uses an oblique rotation that allows the resulting factors to be correlated (Kline, 1994). The resulting two–factor rotation retained 7 of the 10 items and accounted for 48% of the total variance. The α reliability for the two factors combined was found to be .44.

The first factor in the two–factor solution includes 5 items assessing the use of prescription drugs, stimulants, depressants, cocaine, and heroin. Factor loadings range from .36 to .86 and include no loadings on Factor 2 > .16. This first factor clearly represents illegal substances that might be called "hard" drugs. The α reliability for this

first factor was found to be .60. The second factor of the two–factor solution is made up of the 2 items referring to alcohol and tobacco, with factor loadings of .53 and .82, respectively. This second factor clearly represents legal substances. The α reliability for this second factor was found to be .34. The items assessing use of marijuana, hallucinogens, and designer drugs load >.32 on both factors suggesting that, at least for this sample, marijuana, hallucinogens, and designer drugs do not fit neatly into either the legal or illegal drug categories. The correlation between these two factors is .31 and indicates that these factors, although distinct, are both assessing use of substances.
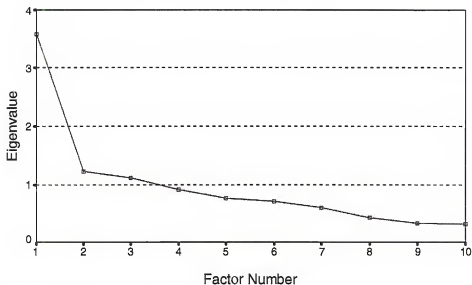
Figure 2 - Factor Scree Plot of the Substance Use Scale

The one-factor solution retains all 10 items with factor loadings ranging from .32 to .80. This factor accounts for 36% of the total scale variance. The α coefficient for the 10–item SUS was found to be .67, with corrected item to total correlations ranging from .64 to .24. The tobacco item showed the weakest item to total correlations (.24) and if dropped would increase the α coefficient for the scale to .70. Because the one factor solution retains all items and is more reliable ($\alpha = .67$) than the two factors individually

or combined, it is a better representation of simple structure and will be retained for use in the main analyses.

The validity of the SUS is supported by its high correlation with the Permissiveness Subscale from the Substance Abuse Attitudes Scale ($r = .46$) and with the Attitudes Toward Substances Scale ($r = .40$). It also correlates with constructs associated with drug use including age ($r = -.13$), gender ($r = -.16$; male = 0, female = 1), SES of father ($r = -.13$), and Life Style and Risk from the Values Scale ($r = .12$ and .25, respectively). Overall, the reliability and validity of the SUS is demonstrated. The reliability for the scale is weaker than is ideal, but it is as reliable as would be theoretically predicted. To boost reliability, substance users would have to use all 10 substances fairly equally, a pattern inconsistent with users who frequently identify a "drug of choice." These results justify the retention of the SUS as a measure of substance use behavior. Individual items from the SUS will be used to measure the use of specific substances or groups of substances as predicted by the hypotheses.

Sexual Experiences Survey

The Sexual Experiences Survey (SExS) was substantially modified from Koss and Oros's (1982) original design and purpose for the instrument. In particular, the original instrument (Koss and Oros, 1982) was designed to measure males' commission of sexually coercive acts and females' experiences as recipients of sexually coercive acts. Koss and Oros (1982) also used a "yes/no" response format. The scale was modified to measure commission of sexually coercive acts by both males and females. In addition, the response format was changed to a 7–point Likert scale ranging from 0 = "never" to 6 = "often." The SExS considers the possibility that force or the threat of force may have been used in a situation, but for various reasons sexual intercourse did not occur. The scale consists of 10 statements that include a progression of the type of coercion (i.e.,

from verbal coercion, to threats of violence, to the use of violence) and a progression on the type of sexual acts (i.e., kissing and petting, to attempted intercourse, to oral or anal intercourse). The SExS also includes three unscored items assessing consensual sexual intercourse, having another person misinterpret the level of intimacy one desires, and having been raped. Higher scores reflect a greater reported frequency of engaging in sexually coercive behaviors.

A frequency analysis of the responses shows participants endorsing the full range of the Likert scale for items assessing verbal coercion and a restricted range (0 – 4) for some items assessing the use of force or the threat of force. On the three verbal coercion items, 82 – 96% of the sample reported never engaging in the target behavior. On the six items assessing the use of force or the threat of force, 94 – 98% of the sample reported never engaging in the target behavior. On the final item assessing being "so aroused you could not stop," 82% of the sample reported never being in this situation.

Principle components factor analysis of the SExS produced the scree plot depicted in Figure 3. The results of the scree test (Cattell, 1978) for the SExS indicate that one factor should be retained. This factor includes all 10 items and accounts for 68% of the total scale variance. Factor loadings range from .43 to .97. The α coefficient for the scale was found to be .84 with corrected item to total correlations ranging from .44 to .83. The items assessing being "so aroused you could not stop" and "saying things you didn't really mean" showed the weakest item to total correlations (.45 and .48 respectively) and if these items had been dropped the α coefficient for the scale would increase.

The validity of the SExS is supported by its significant correlations with other variables including the Rape Myth Scale ($r = .50$), Sex–Role Stereotyping Scale ($r = .26$), gender ($r = -.1607$; male = 0, female = 1), the Permissiveness Subscale from the Substance Abuse Attitudes Scale ($r = .30$), the Attitudes Toward Substances Scale ($r = $

.26), and the Substance Use Scale ($r = .31$). In addition, the SExS is negatively correlated with many values including Altruism ($r = -.30$), Personal Development ($r = -.36$), Orientation Toward Self–Actualization ($r = -.38$), and Social Orientation ($r = -.25$). Factor analysis yielded one factor that accounts for 68% of the total variance. This is highly consistent with the factor analysis by Koss and Oros (1982), which found one factor that accounted for 67% of the variance. Koss and Oros (1982) also found that between 2 – 6% of their university sample of men reported using some degree of physical force or threats of physical force to coerce partners into sexual acts. In the current sample, 5 – 14% of males reported using some degree of physical force or threats of physical force to coerce partners into sexual acts (1.6% of the females reported using some force to obtain kissing or petting). Overall, the validity of the SExS is clearly demonstrated. The items for the scale are also very reliable. These results justify the retention of the SExS as a measure of coercive sexual behavior.
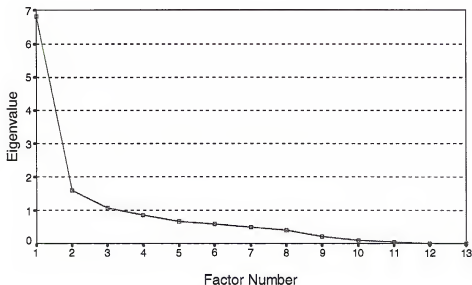

Figure 3 – Factor Scree Plot of the Sexual Experiences Survey

Music Preference Questionnaire

The Music Preference Questionnaire (MPQ) was developed by the author and is designed to measure participants' global commitment to their preferred style of music. Principle components factor analysis of the MPQ yielded the scree plot depicted in Figure 4. The results of the scree test (Cattell, 1978) for the MPQ indicate that either six or possibly eleven factors should be retained. However, it is difficult to interpret six different factors and nearly impossible to interpret eleven factors. In addition, the purpose of this study is to determine how global commitment (rather than specific commitment factors) interacts with music preference, values, attitudes, and behaviors. Consequently, these individual factors are not specifically of interest in this study. In fact, the MPQ was intended to assess global commitment by tapping a wide variety of possible ways in which listeners commit to their music preference. The presence of a large number of factors indicates that the instrument is functioning as expected.
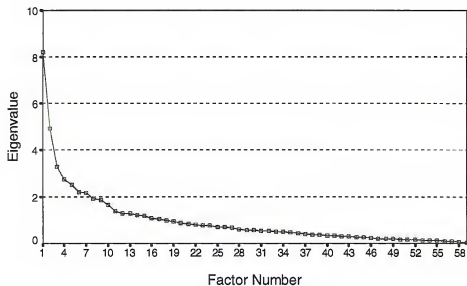

Figure 4 – Factor Scree plot of the Music Preference Questionnaire

In order to obtain a measure of global commitment, the unrotated factor matrix was used to select items that loaded > .30 on the first factor, which accounts for 13.9% of the total MPQ variance. Thirty–one items loaded > .30 on the first factor. An coefficient α was computed for these 31 items and yielded a value of .89. One item, which assessed hours spent listing to non–favorite styles of music via CDs on weekdays, contributed almost nothing to the reliability of the 31–item scale. Because of this negligible contribution and the fact that the item did not relate to the listeners' preferred style of music, this item was dropped from the scale, resulting in a final total of 30 items with an α coefficient of .89.

The final 30–item scale retained items from all domains of the MPQ, including amount of listening, desire to listen more, context of listening, spending money on music related activities, music preference influencing behavior and fantasizing about being and meeting a famous musician. Three items also were included relating to consuming other styles of music. The total score for these 30 items is labeled the Global Commitment Index (GCI) and will be used as the measure of global commitment hypothesized to interact with music preference to impact the dependent variables in this study. The 30 items from the MPQ included in the GCI are highlighted in bold in Appendix A.

<div align="center">Main Analyses</div>

Values

Five hypotheses were made regarding the relationship between music preference, global commitment, and five groups of values from the Values Scale (Super & Nevill, 1986). It was expected that significant differences in values would be found for the different music preference groups and that these differences would be mediated by the listeners' global commitment to their preferred style of music. In particular, global commitment and music preference were expected to interact such that as global

commitment increased, the value differences between the music preference groups would also increase.

Hypothesis 1 predicted that on the Utilitarian Orientation factor of the Values Scale (Super & Nevill, 1986), music preference (MP) and global commitment (GC) will interact such that popular rock fans will score higher as their GC increases whereas alternative fans will score lower on this factor as their GC increases. To test this hypothesis, a hierarchical multiple regression was computed with MP, the Global Commitment Index (GCI), and MP × GCI serving as predictor variables and Utilitarian Orientation serving as the criterion variable. The predictor variables were entered into the model in the order listed. The results indicate that there is no significant interaction effect for MP × GCI on the Utilitarian Orientation factor and that Hypothesis 1 was not supported, $F(3, 164) = 2.08$, $p < 0.16$. However, a significant main effect for MP was found, $F(3, 164) = 6.40$, $p < 0.02$. The means for the MP categories were 48.8 for popular rock fans and 46.2 for college/alternative fans, indicating that popular rock fans were more oriented to the utilitarian values of Economics, Advancement, Prestige, Authority, and Achievement than were college/alternative fans.

Hypothesis 2 predicted that on the Orientation Toward Self–Actualization factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that college/alternative fans will score higher on this factor as their GC increases whereas heavy metal rock fans will score lower on this factor as their GC increases. This hypothesis could not be tested in the current analysis because heavy metal rock fans were not sufficiently represented in the sample (i.e., only 1 out of 282 indicated a preference for heavy metal rock). However, to examine the relationship between the Orientation Toward Self–Actualization factor, MP, and GC, a hierarchical multiple regression was computed with MP, the GCI, and MP × GCI serving as predictor variables and

Orientation Toward Self–Actualization serving as the criterion variable. The predictor variables were entered into the model in the order listed. The results indicate that there is no significant interaction effect for MP × GCI on the Orientation Toward Self–Actualization factor, $F(3, 164) = 0.32$, $p < 0.58$. The main effect for MP was also nonsignificant, $F(3, 164) = 1.44$, $p < 0.24$.

Hypothesis 3 predicted that on the Individualistic Orientation factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that college/alternative fans will score higher on this factor as their GC increases whereas popular rock fans will score lower as their GC increases. To test this hypothesis, a hierarchical multiple regression was computed with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), MP, the GCI, and MP × GCI serving as predictor variables and Individualistic Orientation serving as the criterion variable. The predictor variables were entered into the model in the order listed. The SSS was included as a covariate because it is significantly related to both Individualistic Orientation and MP and may be a confounding factor (see above). The results indicate that Hypothesis 3 was not supported, $F(3, 163) = 0.27$, $p < 0.61$. The main effect for MP was also nonsignificant, $F(3, 163) = 0.05$, $p < 0.82$.

Hypothesis 4 predicted that on the Social Orientation factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that popular rock fans will score higher on this factor as their GC increases whereas heavy metal rock fans will score lower as their GC increases. This hypothesis could not be tested in the current analysis because heavy metal rock fans were not sufficiently represented in the sample (i.e., only 1 out of 282 indicated a preference for heavy metal rock). However, to examine the relationship between the Social Orientation, MP, and GC, a hierarchical multiple regression was computed with MP, the GCI, and MP × GCI serving as predictor variables and Social Orientation serving as the criterion variable. The predictor variables were entered into

the model in the order listed. The results indicate that there is no significant interaction effect for MP × GC on the Social Orientation factor, $F(3, 163) = 0.01$, $p < 0.93$. The main effect for MP was also nonsignificant, $F(3, 163) = 3.83$, $p < 0.06$.

Hypothesis 5 predicted that on the Adventurous Orientation factor of the Values Scale (Super & Nevill, 1986), MP and GC will interact such that heavy metal rock and college/alternative fans will score higher on this factor as their GC increases whereas popular rock fans will score lower as their GC increases. This hypothesis could not be fully tested in the current analysis because heavy metal rock fans were not sufficiently represented in the sample (i.e., only 1 out of 282 indicated a preference for heavy metal rock). However, a partial test of the hypothesis concerning the relationship of popular rock and college/alternative with the Adventurous Orientation factor was performed. To provide a partial test of the hypothesis, a hierarchical multiple regression was computed with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), MP, the GCI, and MP × GCI serving as predictor variables and Adventurous Orientation serving as the criterion variable. The predictor variables were entered into the model in the order listed. The SSS was included as a covariate because it is significantly related to both the Adventurous Orientation and MP and may be a confounding factor as indicated earlier. The results indicate that Hypothesis 5 was not supported, $F(4, 157) = 0.21$, $p < 0.66$. The main effect for MP was also nonsignificant, $F(4, 157) = 1.04$, $p < 0.31$.

In summary, it was hypothesized that when value differences occurred between music preference groups, these differences would be mediated by global commitment such that the music preference groups' values would continue to diverge as their commitment to their music preference increased. This interaction between music preference and global commitment with groups of related values was not supported in this study. However, significant differences in Utilitarian Orientation values were found

for popular rock and college/alternative fans. On the Utilitarian Orientation values, popular rock fans scored significantly higher than college/alternative fans. These results indicate that the differences between music preference groups are not just superficial differences of music tastes or fashion aesthetics, but extend to the deeper levels of the person, to the values that they hold.

Attitudes

Three hypotheses were made regarding the relationship between music preference, global commitment and three attitude assessment instruments. It is believed that fans of popular rock, for instance, will have significantly different attitudes toward women and toward substances than fans of other music styles. It is further believed that as popular rock fans become more committed to their preference for popular rock, their attitudes toward women and toward substances will become increasingly divergent from fans of other music styles.

Attitudes toward women

Hypothesis 6 predicted that on the Sex–Role Stereotyping Scale (SRS; Burt, 1980), MP and GC will interact such that popular rock fans will score higher as their GC increases whereas college/alternative fans will score lower as their GC increases. To test this hypothesis, a hierarchical multiple regression was computed with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), MP, the GCI, and MP × GCI serving as predictor variables and the SRS serving as the criterion variable. The predictor variables were entered into the model in the order listed. The SSS was included as a covariate because it is significantly related to both the SRS and MP and may be a confounding factor (see above). The results indicate that Hypothesis 6 was not supported, $F(4, 157) = 0.00$, $p < 0.96$. The main effect for MP was also nonsignificant, $F(4, 157) = 2.73$, $p < 0.11$.

These results are inconsistent with the findings of Kruse (1994), who found significant differences on the Sex–Role Stereotyping Scale for different music preference categories. Considering that the above analysis approached statistical significance and that Kruse (1994) did not include the SSS as a covariate, a separate one–way ANOVA with MP as the IV and the SRS as the DV was also computed to allow a comparison between this study and Kruse (1994). The result of this test was significant, $F(1, 166) = 4.94$, $p < 0.03$. The means for the MP categories were 25.9 for popular rock fans and 23.3 for college/alternative fans, indicating that popular rock fans were more sex–role stereotyped than were college/alternative fans.

These results are confusing. MP differences on the SRS are nonsignificant when the SSS is included in the model, but the relationships of MP with the SRS and MP with the SSS are not symetrical. In particular, college/alternative fans score high on the SSS and low on the SRS, but popular rock fans score low on the SSS and high on the SRS. This pattern suggests a possible interaction effect. A separate multiple regression was calculated using the SSS, MP, and MP × SSS as predictor variables and the SRS as the criterion variable. The predictor variables were entered into the model in the order listed. The results indicate that only the main effect for the SSS is significant, $F(3,158) = 11.72$, $p < 0.01$. MP was again nonsignificant when the SSS was entered first in the model ($F(3,158) = 2.80$, $p < 0.10$) and the interaction was also nonsignificant ($F(3,158) = 3.05$, $p < 0.09$). However, when the Type III Sums of Squares were used for the F tests, the main effects for both the SSS ($F(3,158) = 8.01$, $p < 0.01$) and MP ($F(3,158) = 4.83$, $p < 0.03$) were significant. Type III Sums of Squares factors out the variance common to all predictor variables so that each variable is tested as if it was entered into the regression equation last. In other words, MP differences in Sex-Role Stereotyping Scale scores are

significant when the effects of the Sensation Seeking Scale and the interaction MP × SSS are factored out.

Hypothesis 7 predicted that on the Rape Myth Scale (RMS; Lonsway & Fitzgerald, 1995), MP and GC will interact such that heavy metal rock fans will score higher as their GC increases whereas college/alternative fans score lower as their GC increases. This hypothesis could not be tested in the current analysis because heavy metal rock fans were not sufficiently represented in the sample (i.e., only 1 out of 282 indicated a preference for heavy metal rock). However, to examine the relationship between the RMS, MP, and GC, a hierarchical multiple regression was computed with MP, the GCI, and MP × GCI serving as predictor variables and the RMS serving as the criterion variable. The predictor variables were entered in the order listed. The results indicate that there is no significant interaction effect for MP × GC on the RMS, $F(3, 164) = 0.79$, $p < 0.38$. The main effect for MP with the RMS was also nonsignificant, $F(3, 164) = 0.06$, $p < 0.81$.

Attitudes toward substances

Hypothesis 8 has three parts: 1) permissive attitudes toward tobacco and alcohol will be equal for all music preference groups; 2) preference for college/alternative and heavy metal rock will be associated with more permissive attitudes toward illegal drug use; and 3) college/alternative and heavy metal rock fans' attitudes toward illegal drug use will become more permissive as their GC increases. Attitudes Toward the use of specific substances or groups of substances were measured by the Attitudes Toward Substances Scale (ATS; constructed by the author). This hypothesis could not be tested in the current analysis because heavy metal rock fans were not sufficiently represented in the sample (i.e., only 1 out of 282 indicated a preference for heavy metal rock). However, a partial test of Hypothesis 8 was possible concerning the relationship between the ATS,

preference for college/alternative music, and GC. A partial test of Hypothesis 8 requires two separate analyses. The first analysis involved a hierarchical multiple regression with MP, the GCI, and MP × GCI serving as predictor variables and the sum of the two items from the ATS assessing alcohol and tobacco serving as the criterion variable. The predictor variables were entered in the order listed. The results indicate no MP differences on the ATS items assessing alcohol and tobacco, $F(3, 164) = 2.53$, $p < 0.12$. The interaction effect for MP × GCI was also nonsignificant, $F(3, 164) = 0.45$, $p < 0.51$. These results are consistent with Part 1 of Hypothesis 8.

To provide a partial test of Parts 2 and 3, a hierarchical multiple regression was computed with MP, the GCI, and MP × GCI serving as predictor variables and the sum of the eight items from the ATS assessing illegal substances serving as the criterion variable. The predictor variables were entered in the order listed. The results indicate no MP differences on the ATS items assessing illegal substances ($F(3, 163) = 3.72$, $p < 0.06$), which fails to support Part 2 of Hypothesis 8. The interaction effect for MP × GCI was also nonsignificant ($F(3, 163) = 0.28$, $p < 0.60$), again failing to support Part 3 of Hypothesis 8. The relationship between MP, GC, and attitudes toward drugs anticipated by Hypothesis 8 was not supported.

To explore further the relationship between permissive attitudes toward drug use, MP, and GC, an hierarchical multiple regression was computed with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), MP, the GCI, and MP × GCI serving as predictor variables and the Permissiveness Subscale from the Substance Abuse Attitudes Scale (SAA; Jenkins, Fisher, & Applegate, 1990) serving as the criterion variable. The predictor variables were entered in the order listed. The SSS was included as a covariate because it is significantly related to both the SAA and MP and may be a confounding factor (see above). The results indicate no main effect for MP differences on the SAA

$(F(4, 157) = 1.99, p < 0.17)$ and no interaction effect for MP × GCI on the SAA $(F(4, 157) = 0.39, p < 0.54)$.

No significant differences were found for music preference groups on any of the attitude measures used in this study. All tests for an interaction between music preference and global commitment on the attitude measures were also nonsignificant. These results indicate very clearly that attitudes toward women and permissive attitudes toward substances are unrelated to music preference and the listener's global commitment to that music style.

Behaviors

The third area in which a relationship with music preference and global commitment was predicted is behaviors, specifically sexually coercive and substance use behaviors. Again it was hypothesized that there would be music preference differences in reported sexually coercive acts and the use of substances. Global commitment was expected to interact with music preference such that one music preference group would report higher frequencies of the target behaviors as their global commitment increased whereas another group would report lower frequencies of the target behaviors as their global commitment increased.

Sexual coercion

Hypothesis 9 states that MP and GC will interact such that heavy metal rock fans will score higher on the Sexual Experiences Survey (SExS; Lonsway & Fitzgerald, 1995) as their GC increases whereas college/alternative fans will score lower on the SExS as their GC increases. This hypothesis could not be tested in the current analysis because heavy metal rock fans were not sufficiently represented in the sample (i.e., only 1 out of 282 indicated a preference for heavy metal rock). However, to examine the relationship between the SExS, MP, and GC, a hierarchical multiple regression was computed with

MP, the GCI, and MP × GCI serving as predictor variables and the SExS serving as the criterion variable. The predictor variables were entered in the order listed. The results indicate that there is no significant interaction effect for MP × GC on the SExS, $F(3, 161)$ = 0.52, $p < 0.48$. The main effect for MP was also nonsignificant, $F(3, 161) = 2.61$, $p < 0.11$.

Substance use

Hypothesis 10 has three parts: 1) the use of tobacco and alcohol will be equal for all music preference groups; 2) preference for college/alternative and heavy metal rock will be associated with higher usage of illegal drugs; and 3) college/alternative and heavy metal rock fans' use of illegal drugs will increase as their GC increases. The use of specific substances or groups of substances was measured by the Substance Use Scale (SUS; constructed by the author). This hypothesis could not be tested in the current analysis because heavy metal rock fans were not sufficiently represented in the sample (i.e., only 1 out of 282 indicated a preference for heavy metal rock). However, a partial test of Hypothesis 10 was possible concerning the relationship between the SUS, preference for college/alternative, and GC. A partial test of Hypothesis 10 requires two separate analyses. The first analysis involved a hierarchical multiple regression with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), MP, the GCI, and MP × GCI serving as predictor variables and the sum of the two items from the SUS assessing alcohol and tobacco serving as the criterion variable. The predictor variables were entered in the order listed. The SSS was included as a covariate because it is significantly related to both MP and the sum of the two items from the SUS assessing alcohol and tobacco and therefore may be a confounding factor (see above). The results indicate significant MP differences on the SUS items assessing alcohol and tobacco, $F(4, 157) =$ 6.56, $p < 0.02$. The means for the MP categories were 3.5 for college/alternative fans and

2.6 for popular rock fans, indicating that college/alternative fans report more frequent use of alcohol and tobacco than do popular rock fans. The interaction effect for MP × GCI was nonsignificant, $F(4, 157) = 2.78$, $p < 0.10$. These results are inconsistent with Part 1 of Hypothesis 10.

To provide a partial test of Parts 2 and 3, a hierarchical multiple regression was computed with the SSS, MP, the GCI, and MP × GCI serving as predictor variables and the sum of the eight items from the SUS assessing illegal substances serving as the criterion variable. The predictor variables were entered into the model in the order listed. The SSS was included as a covariate because it is significantly related to both MP and the sum of the eight items from the SUS assessing illegal drugs and may therefore be a confounding factor (see above). The results indicate significant MP differences on the SUS items assessing illegal substances ($F(4, 157) = 5.77$, $p < 0.02$), which supports Part 2 of Hypothesis 10. The means for the MP categories were 2.4 for college/alternative fans and 1.2 for popular rock fans, indicating that college/alternative fans report more frequent use of illegal drugs than do popular rock fans. The interaction effect for MP × GCI was nonsignificant ($F(4, 157) = 0.04$, $p < 0.85$), failing to support Part 3 of Hypothesis 10. The relationship between MP, GC, and attitudes toward drugs anticipated by Hypothesis 10 was not supported.

These above results regarding the relationship between sexually coercive and substance use behaviors with music preference and global commitment offer limited support for one of the two general hypotheses of this study. Hypothesis A states that music preference will be significantly associated with values, attitudes, and behaviors. Hypothesis B states that music preference and global commitment to that music preference will interact such that differences in values, attitudes, and behaviors between music preference groups will only be statistically significant when commitment is high.

Support for Hypothesis A was also found in the significant results regarding the relationship between values, music preference, and global commitment.

The main analyses of this study identified several differences between popular rock and college/alternative fans. Significant differences were found between popular rock fans and college/alternative on values (Utilitarian Orientation), and on behaviors (the use of alcohol, tobacco, and a variety of illegal substances). In particular, popular rock fans place more emphasis on the Utilitarian Orientation than their college/alternative counterparts. In addition, college/alternative fans reported more frequent use of alcohol, tobacco, and a variety of illegal substances than their popular rock counterparts. These results provide solid support for Hypothesis A concerning values and behaviors, but not attitudes.

No support for Hypothesis B was found. Although several interaction effects approached statistical significance, none reach the criterion of $p < .05$. However, several ancillary analyses, which follow, provide additional support for Hypotheses A and B and strengthen the conclusion that music preference and global commitment are related to values, attitudes, and behaviors.

<u>Ancillary Analyses</u>

Because the main analyses focused primarily on grouped or summed dependent variables, it is possible that grouping individual scales (i.e., individual values from the Values Scale, Super & Nevill, 1986) or items (i.e., individual items from the Attitudes Toward Substances Scale and Substance Use Scale) left significant differences in the components of these variables obscured or overlooked. To determine whether this occurred, a series of ancillary analyses was computed on the 20 individual values from the Values Scale (Super & Nevill, 1986), on the ten individual items from the Attitudes Toward Substances Scale, and the ten individual items from the Substance Use Scale.

These analyses were expected to provide more specific information regarding the relationship between music preference, global commitment, values, attitudes, and behaviors will be revealed.

<u>Individual Values</u>

The Values Scale (Super & Nevill, 1986) was used to assess the following values: Ability Utilization, Achievement, Advancement, Aesthetics, Altruism, Authority, Autonomy, Creativity, Cultural Identity, Economics, Life Style, Personal Development, Physical Activity, Physical Prowess, Prestige, Risk, Social Interaction, Social Relations, Variety, and Working Conditions. For the main analyses, these 20 values were grouped into five factors identified by Šverko (1995) and significant differences were found between popular rock fans and college/alternative fans on the Utilitarian Orientation and Social Orientation factors. To provide a more detailed analysis of the value differences between popular rock and college/alternative fans, each of the 20 values assessed by the Values Scale was subjected to the same analysis as the five factors. In particular, a hierarchical multiple regression analysis was computed for each of the 20 values for a total of 20 analyses.

Before running these analyses, Pearson R correlations were computed to determine which values were significantly correlated with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), a potential confound controlled for in the main analyses. The results of this analysis found five values significantly correlated with the SSS: Ability Utilization, Cultural Identity, Physical Activity, Physical Prowess, and Risk. All analyses involving these five values included the SSS as a covariate, which was entered first into the hierarchical multiple regression models.

Each analysis used a hierarchical multiple regression with MP, the Global Commitment Index (GCI), and MP × GCI serving as predictor variables and the

individual values scales serving as the criterion variable. The predictor variables were entered in the order listed. The analyses involving Ability Utilization, Cultural Identity, Physical Activity, Physical Prowess, and Risk included the SSS as a predictor variable, which was entered first in the model. The results of these 20 analyses indicate significant main effects of MP for Ability Utilization ($F(4, 157) = 6.72$, $p < 0.02$), Achievement ($F(3, 164) = 4.59$, $p < 0.04$), Cultural Identity ($F(4, 156) = 6.44$, $p < 0.02$), Economics ($F(3, 164) = 6.60$, $p < 0.02$), Social Interaction ($F(3, 164) = 5.38$, $p < 0.03$), and Social Relations ($F(3, 164) = 10.32$, $p < 0.01$). For all values on which significant differences were found between popular rock and college/alternative fans, popular rock fans reported placing greater importance on that value than their college/alternative counterparts. Table 3 shows the mean value score for popular rock and college/alternative fans for the six values on which significant differences were found. No other main effects for MP were significant at the $p < .05$ level.

Table 3 – Mean value scores for popular rock and college/alternative music fans.

Value	Popular Rock	College/Alternative
Ability Utilization	10.9	10.5
Achievement	10.9	10.5
Cultural Identity	9.3	8.1
Economics	10.6	10.0
Social Interaction	9.1	8.4
Social Relations	11.1	10.4

One significant interaction effect for MP × GCI was found for the value of Prestige ($F(4, 157) = 8.44$, $p < 0.01$). Figure 5 depicts the interaction effect between Prestige, MP and the GCI. As Figure 5 shows, popular rock fans place increasingly more importance on Prestige as their GCI scores increase whereas college/alternative fans'

valuing of Prestige remains consistent or increases only slightly as their GCI scores increase.
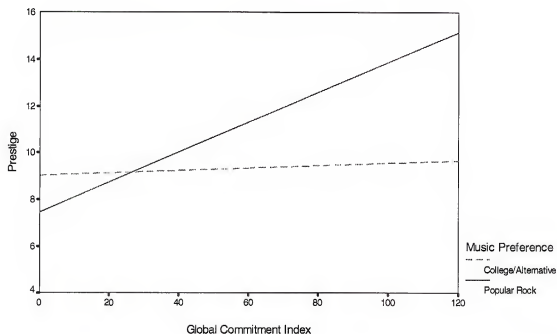

Figure 5 – Interaction effect between Music Preference and the Global Commitment Index on the value of Prestige

In summary, value differences were found between popular rock and college/alternative fans for the values of Ability Utilization, Achievement, Cultural Identity, Economics, Prestige, Social Interaction, and Social Relations. On all these values, popular rock fans scored higher than college/alternative fans. This pattern is consistent with the findings on the Values Scale (Super & Nevill, 1986) factors Utilitarian Orientation and Social Orientation where popular rock fans also scored higher than their college/alternative counterparts. This is to be expected as Economics, Advancement, Prestige, Authority, and Achievement make up the Utilitarian Orientation factor and Social Interaction, and Social Relations make up the Social Orientation factor. However, the differences found for Ability Utilization, which was one of six values included in the

Orientation Toward Self–Actualization factor, and Cultural Identity, which was not included in any of the five factors identified by Šverko (1995), make an additional contribution to our understanding of the relationship between MP and values beyond the main analyses. They provide further evidence of significant differences between popular rock and college/alternative fans at the very deep level of the values they hold.

In addition, an interaction effect was found for MP × GCI on the value of Prestige, which provides some evidence that a relationship between global commitment, MP and values exist. In particular, college/alternative fans valuing of Prestige remains fairly constant whereas popular rock fans show a sharp increase in the importance they place on Prestige as their GCI scores increase. One implication of these results is that to understand how MP groups differ in their values, it is important to understand their level of commitment to their preferred style of music.

Attitudes Toward Substances

The Attitudes Toward Substances (ATS) was used to assess attitudes toward the following substances: tobacco, alcohol, marijuana, hallucinogens, designer drugs, prescription drugs, stimulants, depressants, cocaine, and heroin. For the main analyses, attitudes toward these 10 substances were divided into legal and illegal drugs. No significant differences were found between popular rock fans and college/alternative fans in their attitudes toward either legal or illegal drugs. To provide a more detailed analysis of possible attitude differences between popular rock and college/alternative fans toward the 10 substances assessed by the ATS, each of the 10 items from the ATS was subjected to the same analysis as the legal and illegal drug groupings in the main analyses. In addition, individual items were regrouped to assess attitudes toward psychedelic drugs (i.e., marijuana, hallucinogens, designer drugs), "hard" drugs (i.e., prescription drugs, stimulants, depressants, cocaine, and heroin) and all substances (i.e., the sum of all 10

items). A hierarchical multiple regression analysis was computed for each of the 10 items and the three additional groupings, for a total of 13 analyses.

Before running these analyses, Pearson R correlations were computed to determine which items or item groupings were significantly correlated with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), a potential confound controlled for in the main analyses. The results of this analysis found significant correlations between the SSS and attitudes toward designer drugs, stimulants, and psychedelic drugs. All analyses involving these three scores included the SSS as a covariate, which was entered first into the hierarchical multiple regression models.

Each analysis used a hierarchical multiple regression with MP, the Global Commitment Index (GCI), and MP × GCI serving as predictor variables and each of the 10 individual items from the ATS plus the psychedelic drug, hard drug, and all drug groupings individually serving as the criterion variable in separate analyses. The predictor variables were entered in the order listed. All analyses involving attitudes toward designer drugs, stimulants, and psychedelic drugs included the SSS as a predictor variable, which was entered in the model first. The results of these 13 analyses indicate significant main effects of MP for attitudes toward marijuana ($F(3, 164) = 7.29, p < 0.01$) and attitudes toward all drugs ($F(3, 163) = 4.19, p < 0.05$). For all substances for which significant attitude differences were found between popular rock and college/alternative fans, college/alternative fans reported more permissive attitudes toward these substances than their popular rock counterparts. Table 4 shows the mean score for popular rock and college/alternative fans for the three substances or groups of substances on which significant differences were found. No other main effects for MP were significant at the $p < .05$ level.

Table 4 – Mean Attitudes Toward Substances scores for popular rock and college/alternative music fans.

Substance	Popular Rock	College/Alternative
Marijuana	0.8	1.3
All Substances	5.1	7.9

The results of these ancillary analyses provide some evidence of a relationship between music preference and attitudes toward substances. In particular, college/alternative fans report more permissive attitudes toward all substances in general and marijuana in particular than do their popular rock counterparts. These results provide some evidence that MP groups hold significantly different attitudes, supporting Hypothesis A. However, the absence of significant interaction effects between MP × GCI with attitudes toward substances suggests that global commitment is not relevant to understanding the relationship between music preference and attitudes toward substances.

Substance Use

The Substance Use Scale (SUS) was used to assess frequency of use of the following substances: tobacco, alcohol, marijuana, hallucinogens, designer drugs, prescription drugs, stimulants, depressants, cocaine, and heroin. For the main analyses, these 10 substances were divided into legal and illegal drugs. Significant differences were found between popular rock fans and college/alternative fans in their use of both legal or illegal drugs when one or more of the GC factors were included in the analysis. To provide a more detailed analysis of possible differences between popular rock and college/alternative fans use of the 10 substances assessed by the SUS, each of the 10 items from the SUS was subjected to the same analysis as the legal and illegal drug groupings in the main analyses. In addition, individual items were regrouped to assess use of psychedelic drugs (i.e., marijuana, hallucinogens, designer drugs), "hard" drugs

(i.e., prescription drugs, stimulants, depressants, cocaine, and heroin) and all substances (i.e., the sum of all 10 items). A hierarchical multiple regression analysis was computed for each of the 10 items and the three additional groupings, for a total of 13 analyses.

Before running these analyses, Pearson R correlations were computed to determine which items or item groupings were significantly correlated with the Sensation Seeking Scale (SSS; Madsen, et al., 1987), a potential confound controlled for in the main analyses. The results of this analysis found significant correlations between the SSS and the use of alcohol, marijuana, hallucinogens, psychedelic drugs, and all drugs. All analyses involving these five scores included the SSS as a covariate, which was entered first into the hierarchical multiple regression models.

Each analysis used a hierarchical multiple regression with MP, the Global Commitment Index (GCI), and MP × GCI serving as predictor variables and each of the 10 individual items from the SUS plus the psychedelic drug, hard drug, and all drug groupings individually serving as the criterion variable in separate analyses. The predictor variables were entered in the order listed. All analyses involving the use of alcohol, marijuana, hallucinogens, psychedelic drugs, and all drugs included the SSS as a predictor variable, which was entered first in the model. The results of these 13 analyses indicate significant main effects of MP for use of tobacco ($F(3, 164) = 4.58$, $p < 0.04$), marijuana ($F(4, 157) = 8.10$, $p < 0.01$), hallucinogens ($F(4, 157) = 6.32$, $p < 0.02$), psychedelic drugs ($F(4, 157) = 9.38$, $p < 0.01$), and all drugs ($F(4, 157) = 10.58$, $p < 0.01$). Significant interaction effects for MP × GCI were found for the use of alcohol and heroin.

For all substances for which significant differences in usage frequency were found between popular rock and college/alternative fans, college/alternative fans reported more frequent use of these substances than their popular rock counterparts. Table 5 shows the

mean frequency of use for popular rock and college/alternative fans for the five substances or groups of substances on which significant differences were found. No other main effects for MP were significant at the $p < .05$ level.

Table 5 – Mean substance use scores for popular rock and college/alternative music fans.

Substance	Popular Rock	College/Alternative
Tobacco	0.7	1.2
Marijuana	0.5	1.1
Hallucinogens	0.1	0.3
Psychedelics	0.6	1.6
All Substances	3.8	5.9

Two significant interaction effects for MP × GCI were found for the use of alcohol ($F(4, 157) = 8.44$, $p < 0.01$) and for the use of heroin ($F(4, 157) = 8.44$, $p < 0.01$). Figure 6 depicts the interaction effect between use of alcohol, MP and the GCI. As Figure 6 shows, popular rock fans' use of alcohol is dramatically more frequent as their GCI scores increase, whereas college/alternative fans' alcohol use is more consistent and increases less dramatically as their GCI scores increase. Figure 7 depicts the interaction effect between use of heroin, MP and the GCI. As Figure 7 shows, popular rock fans' use of heroin is increasingly more frequent as their GCI scores increase whereas college/alternative fans' heroin use is consistently near zero as their GCI scores increase. It should be noted that this relationship is based on only 4 of 168 subjects marking 1 on a scale of 0 – 6 (0 = "never" and 6 = "several times daily"). This indicates that popular rock fans are more likely to have tried heroin as their GCI scores increase, whereas college/alternative fans are less likely to have tried heroin as their GCI scores increase. However, because of the number of participants reporting any heroin use, this relationship is likely to be unreliable.
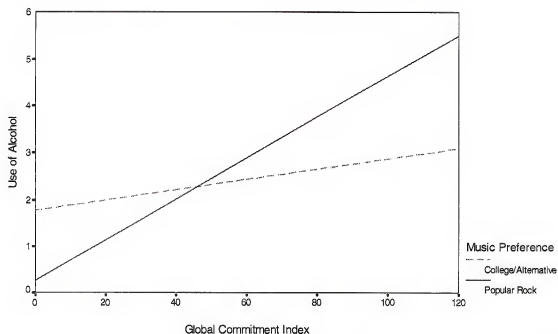
Figure 6 – Interaction effect between Music Preference and the Global Commitment Index on the Use of Alcohol
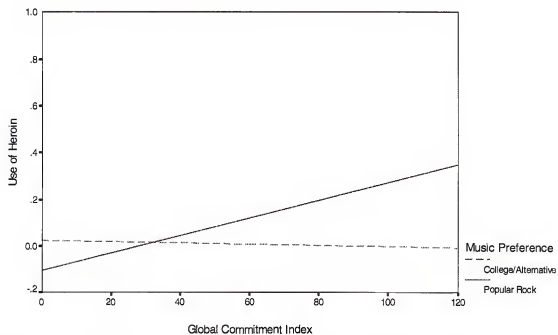

Figure 7 – Interaction effect between Music Preference and the Global Commitment Index on the Use of Heroin

In summary, differences were found between popular rock and college/alternative fans in their use of tobacco, marijuana, hallucinogens, psychedelic drugs, and all substances combined. For all these substances, college/alternative fans reported higher frequencies of drug use than popular rock fans. This pattern is consistent with the findings on the use of alcohol and tobacco and the use of illegal substances where college/alternative fans also scored higher than their popular rock counterparts. The results of these ancillary analyses provide further confirmation of a relationship between substance use and music preference.

In addition, interaction effects for MP × GCI were also found for the use of alcohol and heroin. These interaction effects add a great deal to our understanding of the relationship between commitment to music, MP and substance use. The interaction involving alcohol shows popular rock fans reporting sharp increases in the use of alcohol as their Global Commitment Index scores increase. Popular rock fans appear to begin with near zero alcohol use at low levels of commitment and develop into chronic daily use of alcohol at high levels of commitment. College/alternative fans on the other hand report more consistent use of alcohol beginning at higher levels of use than popular rock fans at low commitment levels with only minimal increase in frequency at higher levels of commitment, at which time their reported use is dramatically lower than popular rock fans at the same commitment level. The interaction involving heroin is similar. In this case, popular rock fans are more likely to have tried heroin as their GCI scores increase, whereas college/alternative fans are less likely to have tried heroin as their GCI scores increase. One clear implication of these results is that to understand how MP groups differ in their substance use, it is important to understand their level of commitment to their preferred style of music.

Consensual Sex

The Sexual Experiences Survey (SExS; Koss & Oros, 1982), included one item assessing the frequency of engaging in consensual sexual intercourse. This question was not included in the score of the SExS because it does not relate to coercive sexual behaviors. However, the frequency with which adolescents engage in consensual sexual intercourse is relevant to understanding the lives of adolescents. It is also possible that consensual sex is related to MP and the Global Commitment Index (GC). To examine the relationship between the consensual sex, MP, and GC, a hierarchical multiple regression was computed with MP, the GCI, and MP × GCI serving as predictor variables and the consensual sex serving as the criterion variable. The predictor variables were entered into the model in the order listed. The results indicate that there is no significant interaction effect for MP × GCI on consensual sex ($F(3, 162) = 1.49, p < 0.23$) or for the main effect of MP ($F(3, 162) = 1.86, p < 0.18$).

Sensation Seeking

The Sensation Seeking Scale (SSS, Zuckerman, 1978) has been used as a covariate in many analyses in this study because it has been associated with music preference (MP) and with other high–risk/reckless behaviors including drug use, promiscuous sex, unprotected sex, driving while intoxicated, shoplifting, and vandalism (Arnett, 1992;1991). This study has also found that the SSS correlates with MP, drug use, drug attitudes, attitudes toward women, sexual behaviors and also with specific values. Because the SSS is correlated with MP, it is also possible that there is an interaction for MP × the GCI. To examine the relationship between the SSS, MP, and GC, a hierarchical multiple regression was computed with MP, the GCI, and MP × GCI serving as predictor variables and the SSS serving as the criterion variable. The predictor variables were entered into the model in the order listed. The results indicate that there is

no significant interaction effect for MP × GCI on the SSS, $F(3, 158) = 0.30$, $p < 0.59$. However, a significant main effect for MP was found, $F(3, 158) = 12.59$, $p < 0.01$. The means for the MP categories were 5.7 for college/alternative fans and 4.7 for popular rock fans, indicating that college/alternative fans were higher in sensation seeking than were popular rock fans.

Global Commitment

The general hypotheses of this study focus on music preference differences in values, attitudes, and behaviors and on an interaction between music preference and the Global Commitment Index. The Global Commitment Index has been found to interact with music preference for only three of the dependent variables used in this study: the value of Prestige, use of alcohol, and use of heroin. These results suggest that global commitment plays a very limited role in music preference and its relationship to values, attitudes, and behaviors, but the above analyses only consider global commitment's possible interaction with music preference and not main effects for global commitment alone, as main effects for global commitment did not relate to the hypotheses. A one-way ANOVA with the Global Commitment Index as the independent variable and music preference as the dependent variable confirmed significant differences in global commitment between popular rock and college/alternative fans ($F(1, 166) = 21.53$, $p < 0.00$). The group means were 48.3 for college/alternative fans and 36.7 for popular rock fans with college/alternative fans reporting greater global commitment than their popular rock counterparts.

These differences indicate that global commitment is relevant to music preference and may be relevant to values, attitudes, and behaviors separate from the interaction with music preference. To determine if global commitment makes a significant independent contribution to the prediction of the dependent variables in this study (i.e., values,

attitudes toward women, attitudes toward substances, sexually coercive behavior, and substance use), all the main analyses and ancillary analyses were recalculated using the Type III Sums of Squares for all F tests. Type III Sums of Squares factor out the variance common to all predictor variables so that each predictor variable is tested as if it was entered into the regression equation last. In other words, using Type III Sums of Squares tests whether music preference (MP) is a significant predictor of the criterion variable independent of the Global Commitment Index (GCI) score and the interaction between MP and the GCI and whether the GCI is a significant predictor of the criterion variable independent of MP and the interaction between MP and the GCI. This analysis allows the independent contribution of both MP and the GCI to be evaluated and also allows for a comparison between the separate contribution of MP and the GCI to the prediction of the criterion variables. The statistically significant results of these analyses are reported in Tables 6 and 7.

Table 6 - Significant main effects of Music Preference independent of the Global Commitment Index and the interaction between Music Preference and the Global Commitment Index

Variable	DF	F Value	p Value
Attitudes Toward Substances Scale			
Attitudes Toward Marijuana	3, 164	4.24	< 0.05
Substance Use Scale			
Use of Alcohol[a]	4, 157	6.32	< 0.02
Use of Alcohol and Tobacco[a]	4, 157	4.55	< 0.04

[a] The Sensation Seeking Scale was included in the model for this analysis.

Table 7 - Significant main effects of the Global Commitment Index independent of Music Preference and the interaction between Music Preference and the Global Commitment Index

Variable	DF	F Value	p Value
Values			
Advancement	3, 164	5.90	< 0.02
Prestige	3, 164	11.69	< 0.01
Working Conditions	3, 163	4.26	< 0.05
Cultural Identity[a]	4, 157	6.26	< 0.02
Utilitarian Orientation Factor	3, 164	4.98	< 0.03
Attitudes Toward Substances Scale			
Attitudes Toward Marijuana	3, 164	4.16	< 0.05
Substance Use Scale			
Use of Alcohol[a]	4, 157	19.50	< 0.01
Use of Marijuana[a]	4, 157	5.50	< 0.03
Use of Hallucinogens[a]	4, 157	3.96	< 0.05
Use of Prescription Drugs	3, 164	13.02	< 0.01
Use of Depressants	3, 164	7.11	< 0.01
Use of Heroin	3, 164	4.82	< 0.03
Use of Alcohol and Tobacco[a]	4, 157	12.25	< 0.01
Use of Psychedelic Drugs[a]	4, 157	5.70	< 0.02
Use of Hard Drugs	3, 164	11.85	< 0.01
Use of Illegal Drugs[a]	4, 157	11.01	< 0.01
Use of All Drugs[a]	4, 157	20.00	< 0.01

[a] The Sensation Seeking Scale was included in the model for this analysis.

The results of these analyses indicate that music preference is significant independent of the Global Commitment Index and the interaction (MP × GCI) for only three dependent variables: permissive attitudes toward marijuana, use of alcohol and tobacco combined, and use of psychedelic drugs (see Table 6). By comparison the Global Commitment Index is significant independent of music preference and the interaction (MP × GCI) for no less than 15 dependent variables: permissive attitudes toward marijuana, use of marijuana, hallucinogens, prescription drugs, depressants, heroin,

alcohol and tobacco combined, psychedelic drugs, hard drugs, illegal drugs, all drugs, the values of Advancement, Working Conditions, Cultural Identity, and the Utilitarian Orientation factor (see Table 7). Based on the number of significant relationships, global commitment seems to be a more important predictor variable than music preference.

For all 17 variables, the relationship between the Global Commitment Index and the dependent variables is in the positive direction such that higher scores on the Global Commitment Index are associated with higher scores on all the dependent variables. These results indicate that global commitment is extremely important for understanding and predicting differences in values, attitudes, and behaviors. These results also provide further confirmation of the importance of music preference for understanding and predicting differences in values, attitudes, and behaviors, but suggest that global commitment may be even more important.

CHAPTER 5
DISCUSSION

Christenson and Roberts (1990) hypothesized that music can act as a source of information, values, and behaviors for those listeners whose music preference is more than just a "taste." Music is not expected to act as a primary source of information, values, and behaviors for all adolescents, but when an adolescent is deeply committed to a particular style of music he or she is more likely to internalize the values, attitudes, and behaviors found within that music subculture. This relationship was expressed in two general hypotheses that were tested in this study. Hypothesis A states that music preference will be significantly associated with values, attitudes, and behaviors. Hypothesis B states that music preference and global commitment to that music preference will interact such that differences in values, attitudes, and behaviors between music preference groups will only be statistically significant when commitment is high. Support for Hypothesis A was found in the areas of values, attitudes, and behaviors. Support for Hypothesis B was found only for values and behaviors.

Values

Support for Hypothesis A was quite strong in the area of values. Significant value differences were found between popular rock and college/alternative fans for the individual values of Ability Utilization, Cultural Identity, Social Interaction, and Social Relations, and for the Utilitarian Orientation factor, which includes Economics, Advancement, Prestige, Authority, and Achievement. Popular rock fans placed significantly more importance on all the above values than did their college/alternative counterparts. The Utilitarian Orientation values represent the traditional values most

associated with business and industry. This suggests that popular rock fans may be more likely to enter traditional occupations (e.g., business, law, medicine, etc.) which typically offer the greatest possibility of satisfying the values of Economics, Advancement, Prestige, Authority, and Achievement. This relationship is to be expected as the Utilitarian Orientation values are generally important to mainstream Americans (Šverko, 1995) and popular rock is the music of mainstream America. The values of Social Interaction and Social Relations represent a desire to be around and in relationship with other people. The fact the popular rock fans place more emphasis on these values than college/alternative fans suggests that popular rock fans are likely to be more extroverted, another trait highly valued in American society. Ability Utilization can be characterized as the "be all you can be" value and represents making use of one's abilities. Cultural Identity involves being accepted and given equal opportunity based on one's racial or ethnic identity. One factor that seems to connect these values is that they are mainstream values. It is therefore consistent that popular rock fans place more importance on these values because, again, popular rock is the music of mainstream America.

Another interpretation is that popular rock fans generally place more importance on values than their college/alternative counterparts. That popular rock fans scored higher on the nine values above lends some support to this position. In addition, a review of the music preference group means for the 20 values measured by the Values Scale (Super & Nevill, 1986) reveals that although the differences were not always statistically significant, popular rock fans scored higher on 15 of the 20 values (see Table 8). Only on the value of Risk did college/ alternative fans score significantly higher than popular rock fans (Note: This difference was not statistically significant when the Sensation Seeking Scale was included in the model).

Table 8 - Mean Value Scale scores for popular rock and college/alternative music preference groups

Value	Popular Rock	College/ Alternative	p Value
Ability Utilization	10.9	10.5	< 0.05
Achievement	10.9	10.5	< 0.03
Advancement	9.9	9.4	< 0.09
Aesthetic	9.6	9.6	< 0.98
Altruism	10.2	10.1	< 0.65
Authority	7.6	7.0	< 0.07
Autonomy	9.9	10.0	< 0.77
Creativity	8.4	8.5	< 0.73
Cultural Identity	9.3	8.1	< 0.01
Economics	10.6	10.0	< 0.01
Life Style	10.0	9.8	< 0.54
Personal Development	11.4	11.3	< 0.45
Physical Activity	8.3	8.2	< 0.58
Physical Prowess	5.9	6.0	< 0.80
Prestige	9.8	9.3	< 0.08
Risk	5.3	6.1	< 0.02
Social Interaction	9.1	8.4	< 0.02
Social Relatations	11.1	10.4	< 0.01
Variety	8.1	7.9	< 0.51
Working Conditions	9.6	9.3	< 0.40

NOTE: p values based on independent samples t-tests.

The fact that popular rock fans place more importance on values generally suggests that popular rock fans may be more engaged in life, more enthusiastic about their values, and possibly more aware of their own values than college/alternative fans. On the other hand, college/alternative fans may be more detached, disinterested, and disaffected, a description that fits well with the angst and hopelessness descriptive of the college/alternative subculture. These results may provide objective confirmation of the "slacker" theme associated with the college/alternative subculture and "Generation X,"

wherein college/alternative fans may be pessimistic, cynical, and disenchanted with mainstream society and the values it upholds. They may be skeptical whether or not success is attainable and that even if attained, the utilitarian rewards of economics, prestige, advancement, authority, and achievement are worthy of pursuit. In contrast, popular rock fans may remain dedicated to pursuing these values and continue to find them valuable.

Music preference and global commitment to one's preferred style of music were found to interact with the value of Prestige, which provides some evidence that a relationship between global commitment, music preference and values exists. In particular, college/alternative fans' valuing of Prestige remains fairly constant whereas popular rock fans show a sharp increase in the importance they place on Prestige as their Global Commitment Index scores increase. One implication of these results is that to understand how music preference groups differ in their valuing of Prestige, it is important to understand their level of commitment to their preferred style of music.

Overall, the data available involving values provides strong evidence that popular rock fans are substantively different from college/alternative fans in the values they hold. The value differences are in the expected directions with popular rock fans valuing mainstream values more than their college/alternative counterparts. The data also provide limited evidence that popular rock and college/alternative fans' values differ based on their global commitment to their preferred style of music.

<u>Attitudes</u>

<u>Attitudes Toward Women</u>

Support for Hypothesis A in the area of attitudes was weak, at best. Regarding attitudes toward women, no significant differences were found between popular rock and college/alternative fans for either sex–role stereotyping or rape myth acceptance. These results are surprising given that significant differences were found between popular rock and college/alternative fans on the Sex–Role Stereotyping Scale by Kruse (1994). The current study was unable to replicate the findings of Kruse (1994). However, the Sensation Seeking Scale (SSS) was included in the present analysis and was not included by Kruse (1994). When the SSS is removed from the model in the current analysis, significant group differences were found with popular rock fans scoring 25.7 on average and college/alternative fans scoring 23.3 on average on the Sex-Role Stereotyping Scale where higher numbers reflected greater sex-role stereotyping. These differences were consistent with Kruse (1994), who found popular rock fans scoring 32.0 on average and college/alternative fans scoring 29.9 on average. These results show a consistent pattern of popular rock fans being more sex–role stereotyped than college/alternative fans. However, it also should be noted that these differences become statistically insignificant when the sensation seeking differences are removed.

It appears that music preference does not contribute to predicting sex–role stereotyping beyond the sensation seeking differences of music preference groups, but the relationship between music preference, sex-role stereotyping, and sensation seeking is complex. Popular rock fans score high on sex-role stereotyping but low on sensation seeking. On the other hand, college/alternative fans score low on sex-role stereotyping and high on sensation seeking. The implied interaction between these variables was not statistically significant. However, differences in sex-role stereotyping between popular

rock and college/alternative fans are statistically significant after the influence of sensation seeking and the interaction between music preference and sensation seeking are removed. This finding suggests that music preference does make a significant contribution toward the prediction of sex-role stereotyping.

Attitudes Toward Substances

Hypothesis A received only minimal support from the results relating to attitudes toward substances. College/alternative fans were found to be more permissive in their attitudes to all substances generally and to marijuana in particular than their popular rock counterparts. It is interesting to note that marijuana was the only individual drug to evidence significant attitude differences between popular rock and college/alternative fans whereas significant differences in frequency of use were found for tobacco, marijuana, hallucinogens and designer drugs. When summed across 10 different substances, college/alternative fans have more permissive attitudes toward substances generally, but for any specific substance, only their attitudes toward marijuana are more permissive. This result may indicate that marijuana holds a privileged place in college/alternative subculture and that they support legalizing this drug in particular but not necessarily any other drugs.

Overall, support for Hypotheses A and B in the area of attitudes toward women and attitudes toward substances was weak at best for Hypotheses A and completely absent for Hypotheses B. The fact that significant differences were found for substance use behaviors but not for the attitudes themselves is puzzling. One explanation for the lack of attitudinal differences between music preference groups found on the attitudes toward substances instruments may be a result of popular rock fans adopting pluralistic attitudes consistent with the American values of personal freedom and choice. Popular rock fans may be saying in effect, "I don't use drugs myself, but others should have the

right to use them if they see fit." This explanation finds some support in the fact that popular rock fans valued Autonomy more than their college/alternative counterparts, a value that taps the desire to decide and act as one sees fit. However, additional research is necessary to determine if this explanation is accurate or to identify other explanations for the inconsistencies between attitudes and behaviors.

<div align="center">Behaviors</div>

Sexual Behaviors

No differences were found between popular rock and college/alternative fans with either their consensual or coercive sexual behavior. The nonsignificant findings for sexually coercive behavior are consistent with the absence of significant differences between music preference groups on attitudes toward women and acceptance of rape myth scores. No support for either Hypothesis A or B was found in the area of sexual behaviors.

Substance Use

Analysis of substance use revealed many significant differences between popular rock and college/alternative fans. For all substances and groups of substances for which music preference group differences were found, college/alternative fans reported more frequent use of these substances than popular rock fans. No previous studies had been found that compared substance use for college/alternative fans to fans of other music styles. It was expected that college/alternative fans would tend to use psychedelic drugs including marijuana, hallucinogens, and designer drugs because these drugs appear to be consistent with the neo–hippie image that is characteristic of the college/alternative subculture. However, it was still surprising that this group's more frequent use of drugs also included all drugs in general, illegal drugs, and the legal drugs of alcohol and tobacco. This profile is generally consistent with the results regarding attitudes toward

substances, where college/alternative fans also reported more permissive attitudes toward all drugs in general and marijuana in particular. However, use of tobacco, alcohol, hallucinogens, psychedelics and illegal drugs evidenced significant differences in usage but corresponding attitude differences were not found.

Music preference and global commitment to one's preferred style of music were found to interact with the use of alcohol and with the use of heroin. For alcohol use, popular rock fans' use of alcohol is dramatically more frequent as their Global Commitment Index scores increase whereas college/alternative fans' alcohol use is more consistent and increases less dramatically as their Global Commitment Index scores increase. For heroin use, popular rock fans use of heroin is increasingly more frequent as their Global Commitment Index scores increase whereas college/alternative fans' heroin use is consistently near zero as their Global Commitment Index scores increase. It should be noted that this relationship is based on only 4 of 168 subjects marking 1 on a scale of 0 – 6 (0 = "never" and 6 = "several times daily") for heroin use in the past month. This indicates that popular rock fans are more likely to have used heroin once in the last month as their Global Commitment Index scores increase, whereas college/alternative fans are less likely to have used heroin as their Global Commitment Index scores increase. However, because of the low number of participants reporting any heroin use, this relationship is likely to be unreliable.

These interaction effects between music preference and global commitment to one's preferred style of music with alcohol and heroin add a great deal to our understanding of the relationship between commitment to music, music preference and substance use. The interaction involving alcohol shows popular rock fans reporting sharp increases in the use of alcohol as their Global Commitment Index scores increase. Popular rock fans appear to begin with near zero alcohol use at low levels of commitment

and develop into chronic daily use of alcohol at high levels of commitment. College/alternative fans on the other hand report more consistent use of alcohol beginning at higher levels of use than popular rock fans at low commitment levels with only minimal increase in frequency at higher levels of commitment, at which time their reported use is dramatically lower than popular rock fans at the same commitment level. The interaction involving heroin is similar. In this case, popular rock fans are more likely to have used heroin as their Global Commitment Index scores increase, whereas college/alternative fans are less likely to have used heroin as their Global Commitment Index scores increase.

Overall, the results involving substance use behavior demonstrate clear behavioral differences between popular rock and college/alternative fans, providing solid support for Hypothesis A. In addition, these results also provide some support for Hypothesis B, suggesting that global commitment is important for understanding the differences between music preference groups. The behavioral differences found were generally consistent with the attitudinal differences, but the behavioral differences were also more robust because differences were found for the use of substances for which no differences in permissive attitudes toward these substances were found.

<u>Sensation Seeking</u>

This study included sensation seeking as a covariate in many of the analyses based on previous findings that sensation seeking is correlated with music preference (Arnett, 1991) and with many of the dependent variables in this study (Arnett, 1991; Zuckerman, 1978). Group differences in sensation seeking were found between popular rock and college/alternative fans with college/alternative fans reporting greater sensation seeking. These differences are to be expected as college/alternative music has a more harsh, aggressive sound that would likely be experienced as unpleasant to a listener who is

uncomfortable with higher levels of stimulation. The fact that sensation seeking was included as a covariate means that all significant findings involving variables that are correlated with sensation seeking are statistically independent of sensation seeking. The independence of music preference from sensation seeking is important because sensation seeking is usually seen as a personality variable (Arnett, 1991; Zuckerman, 1978). Therefore, if an individual's personality influences them to listen to college/alternative music and to use drugs, for example, because they both provide increased sensation, then it is unlikely that music preference has any influence on substance use apart from the fact that they are both related to sensation seeking. The fact that college/alternative fans report higher substance use independent of sensation seeking leaves open the possibility that college/alternative music somehow influences substance use.

Global Commitment

The general hypotheses of this study focused on music preference differences in values, attitudes, and behaviors and on an interaction between music preference and global commitment. Consequently, main effects for the Global Commitment Index were not considered, as they did not relate to the hypotheses. A recalculation of main and ancillary analyses compared the independent contribution of music preference to the independent contribution of the Global Commitment Index. The results indicated that music preference is significant independent of the Global Commitment Index and the interaction between music preference and the Global Commitment Index for only three dependent variables: permissive attitudes toward marijuana, use of alcohol and tobacco combined, and use of psychedelic drugs. By comparison, the Global Commitment Index is significant independent of music preference and the interaction between music preference and the Global Commitment Index for no less than 17 dependent variables: the values of Advancement, Cultural Identity, Prestige, Working Conditions, and the

Utilitarian Orientation factor, permissive attitudes toward marijuana, and the use of alcohol, marijuana, hallucinogens, prescription drugs, depressants, heroin, alcohol and tobacco combined, psychedelic drugs, hard drugs, illegal drugs, and all drugs. The relationship between the Global Commitment Index and each of these variables is in the positive direction such that higher scores on the Global Commitment Index are associated with higher scores on each variable. In addition, significant group differences in global commitment were found between popular rock and college/alternative fans with college/alternative fans reporting greater global commitment than their popular rock counterparts.

Superficially, these results suggest that music preference is virtually unrelated to values, attitudes, and behaviors beyond the global commitment differences of the music preference groups. However, the relationship is more complex. First of all, global commitment is conceptually dependent on music preference. Global commitment is about commitment to one's preferred style of music and has limited meaning outside its reference to the preferred style of music. The fact that college/alternative fans are so much more committed to their preferred style of music than popular rock fans also suggests that global commitment is to some extent a characteristic of music preference. Because college/alternative fans are identified with high global commitment and popular rock fans are identified with low global commitment, when significant relationships are found between global commitment and values, attitudes, and behaviors, these relationships can be interpreted in part as indicating differences between college/alternative and popular rock fans.

Another factor to consider is that the significance of global commitment may be an artifact of this sample in which only popular rock and college/alternative fans were included. Again, for these two groups, global commitment differences are more or less

equivalent to music preference differences and these variables serve as confounds for one another. Including another music preference group that is also highly committed to their preferred style of music (e.g., rap or heavy metal rock) would help to determine to what extent these two constructs are independent of one another.

Finally, the results of this study indicated both music preference and global commitment are important to the understanding of values, attitudes, and behaviors. Three significant interaction effects were found, for the value of Prestige and the use of alcohol and heroin. The fact that music preference and global commitment were found to interact means that both variables are important. In addition, the relationships between values, music preference, and global commitment cannot be fully understood without both music preference and the Global Commitment Index. In particular, popular rock fans score higher than college/alternative fans on the values of Advancement, Cultural Identity, Prestige, and Working Conditions (the differences are statistically significant for Cultural Identity). In contrast, the positive relationship between the Global Commitment Index and these four values means that lower Global Commitment Index scores are associated with lower value scores and visa versa. According to this relationship, popular rock fans, who on average score substantially lower than college/alternative fans on the Global Commitment Index, would be expected to score lower on these four values. This relationship demonstrates that both music preference and global commitment, although highly correlated, both make important contributions to our understanding of values, attitudes, and behaviors.

Overall, the justification for including both music preference and global commitment in future research is clearly documented. The results of this study by themselves cannot fully illuminate the relationship between music preference, global commitment, values, attitudes, and behaviors. What is clear is that relationships between

these variables do exist. However, further research is essential to understanding how music preference and global commitment relate to values, attitudes, and behaviors.

One line of research that is likely to be crucial to understanding the relationship between music preference, global commitment, values, attitudes, and behaviors is the factor analysis of the Music Preference Questionnaire. In this study, a factor analysis was computed, but only to extract a measure of global commitment. The key to the relationship between music preference and global commitment likely resides in the factor structure of global commitment. For example, although global commitment can be viewed as a univariate variable, it is likely made of up factors that help distinguish both between and within music preference groups. Certain music preference groups may identify themselves through advertising their music preference (e.g., displaying bumper stickers or dressing in a highly stylized way). However, these same characteristics may serve to distinguish between subgroups who share the same music preference (e.g., some fans may advertise and not listen to radio whereas others may avoid advertisement and be an avid radio listener). Consequently, two fans can score equally on global commitment but one is high on an "advertisement" factor whereas the other is high on a "radio" factor, and the way each is oriented toward a values such as Prestige might be antithetical. To determine whether these types of relationships exist and to better understand the relationship between music preference, global commitment, values, attitudes, and behaviors, a program of research involving a factor analysis of global commitment will need to be completed. This study also provides a fruitful foundation for other future research projects.

<u>Future Research</u>

This study leaves many questions unanswered regarding the relationship between music preference, global commitment, values, attitudes, and behaviors. Some of these

questions remain because of weaknesses in the present study. Still other questions are stimulated by the results of this study. Future research should redress limitations in the sample, broaden the music preference groups sampled, and refine the Music Preference Questionnaire to explore further the significance of global commitment and the individual factors involved.

Sample

Although the population from which the current sample was taken is relevant to the study of music preference and global commitment, the fact that college students were used limits the generalizability of the results. One limiting factor is age. The mean age for the sample was 20.5 years old with a standard deviation of 1.7 years. The modal class rank was Junior with 75% of the sample ranked as juniors and seniors. This is a decidedly older college sample taken primarily from upper–level psychology courses. These participants are certainly avid consumers of music but are likely different in their use of music media than younger college students and particularly high school or junior high students. The fact that for this sample global commitment declined with both age and class rank supports this contention and indicates that younger and less advanced students reported greater commitment to their preferred style of music. This finding may mean that the more advanced students have less time for music-related activities. Another explanation for this finding is that music preference is not as important for establishing and maintaining an identity for more advanced students. It may be that for upper-level students, academic pursuits have begun to replace music preference as a means of identity formation and sense of belonging. In any case, it is important that this study be replicated with different age groups to test its reliability and to demonstrate the generalizability of its findings. The role of music preference and global commitment in identity formation is also an essential topic for exploration.

Another sampling limitation of this study is the educational level of the participants. Adolescents who are able to succeed in college (at least until junior or senior levels) are generally not considered an at–risk group by social scientists. Of more concern are high school dropouts and students who never pursue college or technical degrees after high school. In particular, it is feared that at–risk students are likely to be most susceptible to negative themes and influences in music (Christenson & Roberts, 1990). Again the current sample likely does not provide adequate generalizability to this at-risk population.

The fact that this sample was drawn primarily from psychology classes also may have imposed certain limitations on the generalizability of results. Certainly choice of majors is not a random process, and students who choose psychology as a major or even to attend psychology courses are likely different in some ways from students in other disciplines. This is likely to be especially true at the level of values. Psychology majors could be expected to place the highest value on Personal Development, Altruism, Social Interaction, and Social Relations, whereas business majors, for example, could be expected to place the highest value on Utilitarian Orientation values of Achievement, Advancement, Authority, Economics, and Prestige. Since significant differences were found in the current study for the social interaction, social relations, and the Utilitarian Orientation values, it is clear that including a broader sample in terms of academic interests could be very important to both the findings and generalizability of these findings.

The limitations of the current sample cited above do not detract from or negate the significant findings of this study. Instead, these limitations simply place the findings in a proper context as being most generalizable to upper–level college students with interests in psychology. However, the obvious conclusion is that these limitations call loudly for

additional research to determine the relationship between music preference, global commitment, values, attitudes, and behaviors for other populations and the population of adolescents as a whole.

<u>Music Preference Groups</u>

Another limitation of this study and its sample is the limited number of music preference groups represented. Only two music preference groups were represented in sufficient numbers to be included in the analyses. This limitation may result from: 1) the age of the sample (upper–level college students may have outgrown more extreme music forms such as rap or heavy metal rock), 2) the context of the sample as university students (a context in which college/alternative, for example, is more accepted), or 3) the academic discipline of the sample (students in agriculture, for instance, would be expected to have a stronger representation of country music fans) as noted above. In any case, efforts should be made in any future research to include a broader number of music preference groups by targeting groups more likely to prefer a specific style of music.

In addition to sampling limitations, the music preference choices offered in the Music Preference Questionnaire also may have had the effect of limiting the endorsement of particular music styles. In particular, failure to include a separate rhythm & blues (R & B) category (R & B was included with popular rock, but 14 subjects wrote in R & B) was almost certainly responsible for this group not being endorsed by 10% of the sample. The result of this omission is that others who would have chosen R & B if it had been listed separately indicated another preference, thereby increasing the error variance for those groups. It is impossible to determine how often this happened or how it affected the outcome of the analyses, but future research should correct this omission. It was also brought to the author's attention by graduate students who administered the study that the musicians offered as examples for heavy metal rock were out of date or inaccurate. This

oversight may account for only one out of 282 participants endorsing heavy metal rock as their preferred style of music when as much as 17% of a previous sample (Kruse, 1994) chose heavy metal rock as their preferred style of music. Another explanation is that heavy metal rock is fading as a dominant music style. In either case, future research should also consider grouping heavy metal rock with "hard rock" to broaden this category somewhat while maintaining its focus on more aggressive forms of rock music.

Music Preference Questionnaire

The Music Preference Questionnaire (MPQ) demonstrated adequate reliability and validity, but future projects should continue to develop and validate this instrument for the comprehensive assessment of global commitment. Two issues relevant for continued development of the MPQ were identified in the process of scoring and working with this instrument. First, some items seemed to have highly variable data that was likely inaccurate. This was particularly true of write–in items where participants appeared not to have read the entire question. A prime example noted above was the length of time the indicated music preference had been their clear favorite. Many subject indicated "forever" or a value that represented all their lives. In addition, when participants entered a number less than 10 it was uncertain whether they intended the value in months (as the question read) or years. For other items, the question placed limits on the response that were sometimes invalid. For instance, number of concerts was specified as "per month," but many subjects attended concerts once per year or once every three months. These problems could likely be solved by rewording the questions or changing the formatting to highlight the most salient parts of the question so that readers would process the necessary information.

A second issue relates to which items to retain in future versions. In the current version, only 30 of the 59 data points were scored for the Global Commitment Index.

However, the problems noted above may be responsible for these items not being retained on the Global Commitment Index. In support of this explanation, only 9 of 29 write–in items were included in the Global Commitment Index. Another possibility is that the omitted questions may not be relevant for popular rock and college/alternative music that formed two thirds of the sample. For example, the exclusivity and percentage of friends who share one's music preference items were not included in the Global Commitment Index, but heavy metal rock or rap fans may express more exclusive tastes and share their music preference with their friends more than popular rock or college/alternative fans. In addition, some items form a conceptual cluster, which is meaningful as a unit but may not be included in the Global Commitment Index as a unit. An example of this is hours listening to radio, where none of the four items assessing radio listening was included in the Global Commitment Index, but radio is a meaningful part of the medium of delivery cluster, along with CDs, clubs, and videos. Finally, the current items may be meaningful for future factor analysis, which will identify discreet global commitment factors. Because of these reasons, it is advisable to retain all current items in future versions until they have been demonstrated to make no contribution to the scale either conceptually or psychometrically.

<u>Conclusions</u>

Research into the impact of music on human beings has lacked the programmatic direction needed to provide more than a basic understanding of the phenomenon. In the area of sensation and perception, psychologists have been studying the psychophysical characteristics of the music's sound stimulus almost since psychology's inception. This research has provided a basic understanding of the essential components of music and how they are perceived. Other researchers have found evidence of subtle and not so subtle differences between people who prefer one style of music over another in such

areas as sensation seeking (Arnett, 1991), substance use (King, 1988), and attitudes toward women (Kruse, 1994). However, very few of these studies have been done, and as a result there are large gaps in our knowledge of how music preference relates to individual differences. Other researchers have moved forward to investigate the direct impact of the music stimulus on relevant variables such as attitudes toward women (Kruse, 1994; St. Lawrence et al., 1991) perception (Lindner and Hynan, 1987), and emotional state (Peretti and Zweifel, 1990; 1983) to test whether music produces massive effects on listeners' emotions, life style, attitudes, and behaviors. These studies have demonstrated significant short–term effects of music on listeners, which are particularly dramatic considering the brevity of the music exposure. However, these studies investigating the short–term impact of music are somewhat premature because it is as yet unclear whether listening to different styles of music over an extended period is associated with pervasive differences between music preference groups. The central question for research into music and music preference is to determine whether music plays a significant role in human development and socialization or whether listeners choose their music preference solely based on preexisting differences. The real question is causation and whether music causes subsequent behavior or whether individual differences cause both music preference and subsequent behavior.

The available research still has not answered the question of causation nor has it demonstrated that meaningful differences between music preference groups even exist. This study has filled in some of the gaps in our knowledge by demonstrating that significant differences between music preference groups exist and that these differences are pervasive across a variety of variables (i.e., values, attitudes, and behaviors). This study documents some specific differences that exist between popular rock and college/alternative fans in the areas of values, attitudes toward substance use, and

substance use. For the purposes of this study, the particulars of the differences are not as important as that differences were found across all areas investigated. These results provide ample justification for a continuing program of research to discover ultimately whether music can be a causal agent in human development and socialization and how and under what conditions music influences human beings.

This study also has introduced the construct of global commitment as an essential variable for understanding differences both between and within music preference groups. It is clear from these results that a measure of global commitment should be included in any study that examines possible differences between music preference groups. Measuring global commitment allows serious fans to be isolated from casual fans. This contribution is essential when music preference categories are broad and vaguely defined. It is also possible that global commitment is more significant for understanding the relationship between music, values, attitudes, and behaviors than is music preference.

Overall, popular rock fans were found to place more importance on mainstream utilitarian and social values consistent with this mainstream music form. College/alternative fans hold more permissive attitudes toward marijuana and all drugs in general than their popular rock counterparts. Consistent with this finding, college/alternative fans also use more tobacco, alcohol, marijuana, hallucinogens, psychedelics, illegal drugs and all drugs generally than popular rock fans. On the other hand, popular rock fans use alcohol and heroin more frequently as their commitment to popular rock increases, whereas college/alternative fans use of these substances is more stable across commitment level. How other music preference groups such as rhythm & blues, country, heavy metal, and rap compare on these and other variables is up to other projects to discover.

Christenson and Roberts (1990) hypothesized that music can act as a source of information, values, and behaviors for those listeners whose music preference is more than just a "taste" because when an adolescent is deeply committed to a particular style of music he or she is more likely to internalize the values, attitudes, and behaviors found within that music subculture. The current study found some support for Christenson and Roberts' (1990) hypothesis. The fact that significant differences were found between popular rock and college/alternative fans in the areas of values, attitudes, and behaviors indicates that substantive differences exist between these two groups. The fact that interactions were found between music preference groups based on global commitment indicates that listeners for whom their music preference is more than just a "taste" are significantly different from more casual listeners. These results do not in any way prove that music *does* act as a source of information, values, and behaviors for highly committed listeners. Instead, this study demonstrates that music *can* act as source of information, values, and behaviors. It remains for future researchers to determine whether these differences are influenced specifically by the music to which these listeners are committed.

MUSIC PREFERENCE QUESTIONNAIRE

This is the second of two separate batteries of questions you are being asked to complete as part of this study. This battery contains questions about your favorite style of music, how much you listen, and what ways music affects your life. As in Battery I, specific instructions (*printed in italics*) will proceed each series of questions. Please read these instructions carefully as they inform you about the content of the questions and the specific scale to be used to respond to the questions.

Your responses for all questions in this second battery **must be written or marked on this form**. Do not attempt to mark your answers for this second battery on the bubble answer sheet. Please begin by writing the Code Number (located on the cover of Battery I in the upper right–hand corner) in the appropriate space at the top of this page. Also write in the Class Number (located on the blackboard) in the appropriate space at the top of this page.

You are encouraged to answer all the questions as well as you can without skipping any. Please work rapidly. If you are not sure, guess—your first thought is most likely to be the right answer for you. Be careful to write or mark your answers in the correct location. If you have any questions about the materials or seem to be missing materials, please raise your hand to ask the experimenter.

1. Please indicate in the space provided the style of music that best represents your favorite style of music. Please do not specify OTHER unless your favorite music cannot reasonably be classified by the music styles listed. CHOOSE ONLY ONE STYLE AS YOUR FAVORITE.

   Classical (e.g., Beethoven, Mozart, Pavarotti) ⓪
   Jazz (e.g., Wynton Marsalis, Kenny G, Fourplay) ①
   New Age (e.g., George Winston, Yanni, Enya) ②
   Country (e.g., Dwight Yokam, Brooks & Dunn, Shania Twain) ③
   Folk (e.g., Judy Collins, Joan Baez, or ethnic folk music) ④
   Popular Rock (e.g., Hootie & the Blowfish, Mariah Cary, Joan Osborne) ⑤
   Rap (e.g., Das EFX, Goodie Mob, The Souls of Mischief) ⑥
   College/Alternative (e.g., Green Day, Red Hot Chili Peppers, Jane's Addiction) ⑦
   Heavy–metal Rock (e.g., Metallica, Anthrax, Megadeath) ⑧
   Other: _____ (e.g., _____, _____, _____) ⑨

2. _____ For how many months has your indicated preference been your CLEAR favorite?

3. Please indicate the extent to which your music preference is limited to the chosen music style on a scale from ⓪ to ⑧ with ⓪ = "its my favorite but I like other styles almost as well" and ⑧ = "I like only my indicated preference."

Questions 4 through 9 are designed to assess how many hours per day you spend listening to your favorite music vs. all other styles of music (weekdays and weekend days are considered separately). When indicating the average number of hours per day you listen to all other styles of music, only include music to which you want to listen.

4. Please indicate in the space provided the average number of HOURS PER DAY you listen to your FAVORITE music ON WEEKDAYS using the following sources.

    _____ Radio   _____ Clubs
    _____ **Tapes or CDs**   _____ **Music Videos**

5. Please indicate in the space provided the average number of HOURS PER DAY you listen to your FAVORITE music ON WEEKEND DAYS using the following sources.

    _____ Radio   _____ **Clubs**
    _____ **Tapes or CDs**   _____ **Music Videos**

6. Please indicate in the space provided the average number of HOURS PER DAY you choose to listen to ALL OTHER music styles ON WEEKDAYS using the following sources.

    _____ Radio   _____ Clubs
    _____ Tapes or CDs   _____ **Music Videos**

7. Please indicate in the space provided the average number of HOURS PER DAY you choose to listen to ALL OTHER music styles ON WEEKEND DAYS using the following sources.

    _____ Radio   _____ Clubs
    _____ Tapes or CDs   _____ **Music Videos**

8. If you had the opportunity to listen to music more than you do now, how many MORE HOURS PER DAY would you listen to the following ON WEEKDAYS.

    _____ **Your favorite music style**   _____ All other music styles

9. If you had the opportunity to listen to music more than you do now, how many MORE HOURS PER DAY would you listen to the following ON WEEKEND DAYS.

    _____ **Your favorite music style**   _____ All other music styles

Questions 10 and 11 ask about your friend's favorite music. Everyone has friends, but some friends are closer to you than others. These questions distinguish between people who are your "close friends" and people who are "just friends."

10. Please indicate in the space provided the PERCENTAGE of your "close friends" whose favorite music is the SAME as your favorite. (Scale: ⓪ = 0% to ⑩ = 100%)

11. Please indicate in the space provided the PERCENTAGE of your "just friends" whose favorite music is the SAME as your favorite. (Scale: ⓪ = 0% to ⑩ = 100%)

Question 12 asks about the different situations or activities in which you listen to your favorite music.

12. Please indicate below in which of these situations you listen to your favorite style of music (bubble all that apply):

⓪ in the car	⑤ while studying
① in bed	⑥ while working
② while exercising or playing sports classes	⑦ while walking between
③ during romantic or dating activities	
drinking	⑧ **while eating or**
④ sit down just to listen	⑨ **while partying**

Questions 13 through 22 ask how often you pursue entertainment that is directly related to your favorite music. Please respond to each question by writing in the number that most accurately reflects how often you engage in these behaviors.

13. _____ **How many tapes or CDs of your favorite style of music do you purchase in an average month?**

14. _____ How many tapes or CDs of all other styles of music do you purchase in an average month?

15. _____ **How many concerts of nationally known musicians who play your favorite style of music do you attend in an average month?**

16. _____ **How many concerts of nationally known musicians who play other styles of music do you attend in an average month?**

17. _____ **How many concerts of local bands who play your favorite style of music do you attend in an average month?**

18. _____ How many concerts of local bands who play all other styles of music do you attend in an average month?

19. _____ How many clubs do you go to in an average month who PRIMARILY feature recordings of your favorite style of music?

20. _____ How many clubs do you go to in an average month who PRIMARILY feature recordings of other styles of music?

21. _____ How many movies do you see in an average month in part because they PROMINENTLY feature your favorite style of music in the soundtrack?

22. _____ How many movies do you see in an average month in part because they PROMINENTLY feature other styles of music in the soundtrack?

Questions 23 through 35 ask about ways in which you might publicly declare what your favorite music is or ways in which your favorite music has affected your lifestyle. For each question, use the following scale:

$\circledcirc$ = 0% to $\circledg$ = 100%

23. **How often** do you put bumper stickers on your car that explicitly indicate your music preference or a favorite band?

24. **How often** do you purchase concert T–shirts, band T–shirts, or other clothing explicitly linked to your favorite style of music?

25. **How often** do you wear your concert T–shirts, band T–shirts, or other clothing explicitly linked to your favorite style of music (if you have purchased any)?

26. **How often** does your preference for your favorite style of music DIRECTLY influence your purchase or acquisition of an article of clothing?

27. **How often** does your preference for your favorite style of music DIRECTLY influence what you wear on a given day or to a given event?

28. **How often** does your preference for your favorite style of music DIRECTLY influence your hair style?

29. **How often** has your preference for your favorite style of music influenced you to get a tattoo, EITHER DIRECTLY OR IN PART?

30. **How often** has your preference for your favorite style of music influenced you to have a part of your body pierced, EITHER DIRECTLY OR IN PART?

31. **How often** does your preference for your favorite style of music DIRECTLY influence your choice of decorations for your room or apartment?

32. **How often** do you use terms or phrases that come from favorite songs?

33. **How often** do you leave a club or party because they are not playing your favorite style of music.

34. **How often** do you fantasize about meeting your favorite musicians?

35. **How often** do you fantasize about "making it big" as a musician in your favorite music style?

Questions 36 and 37 ask about how important you feel it is to know someone's favorite music style before dating them.

36. **If you were considering going out on a date with someone, how important would it be for you to know his or her favorite style of music.** (Scale: $\circledcirc$ = "Not at all important" to $\circledg$ = "Very important)

37. **If you were considering going out on a date with someone, how important would it be that you and your date both shared the SAME favorite style of music.** (Scale: $\circledcirc$ = "Not at all important" to $\circledg$ = "Very important)

NOTE: Items highlighted in bold were included in the Global Commitment Index.

VALUES SCALE

The Values Scale uses a 4–point Likert scale: 1 = of little or no importance, 2 = of some importance, 3 = important, 4 = very important

It is now or will in the future be important for me to . . .

Ability Utilization

1. use all my skills and knowledge. (#1)
2. do work that takes advantage of my abilities. (#21)
3. develop my abilities. (#41)

Achievement

4. have results which show that I have done well. (#2)
5. know that my efforts will show. (#22)
6. reach a high standard in my work. (#42)

Advancement

7. get ahead. (#3)
8. get ahead quickly in my career. (#23)
9. be able to get promotions. (#43)

Aesthetics

10. make life more beautiful. (#4)
11. find pleasure in the beauty of my work. (#24)
12. be concerned with beauty in my work. (#44)

Altruism

13. help people with problems. (#5)
14. be involved in work in which the goal is helping people. (#25)
15. work in a way that makes the world a better place. (#45)

Authority

16. tell others what to do. (#6)
17. be able to be a leader at work. (#26)
18. be the one who manages things at work. (#46)

Autonomy

19. act on my own. (#7)
20. make my own decisions at work. (#27)
21. be free to get on with a job in my own way. (#47)

Creativity

22. discover, develop, or design new things. (#8)
23. create something new in my work. (#28)
24. have a chance to try out new ideas at work. (#48)

Economic Rewards

25. have a high standard of living. (#9)
26. have a good income. (#29)
27. be where employment is regular and secure. (#49)

Life Style

28. live according to my own ideas. (#10)
29. live my life my way. (#30)
30. work at what I want to when I want to. (#50)

Personal Development

31. develop as a person. (#11)
32. have ideas about what to do with my life. (#31)
33. find personal satisfaction in my work. (#51)

Physical Activity

34. get a lot of exercise. (#12)
35. take part in sports and other physical activities. (#32)
36. be physically active in my work. (#52)

Prestige

37. be admired for my knowledge and skills. (#13)
38. be recognized for my accomplishments. (#33)
39. be held in high esteem because of my work. (#53)

Risk

40. do risky things. (#14)
41. feel that there is some risk or some danger in the work I do. (#34)
42. take on dangerous tasks if they interest me. (#54)

Social Interaction

43. do things with other people. (#15)
44. work in a group rather than by myself. (#35)
45. be with other people while I work. (#55)

Social Relationships

46. be with friends. (#16)
47. do things with people l like. (#36)
48. be with my kind of people. (#56)

Variety

49. have every day be different in some way from the one before it. (#17)
50. do a number of different things during the day. (#37)
51. change work activities frequently (#57)

Working Conditions

52. have good space and light in which to work. (#18)
53. have good sanitary facilities (e.g. washroom) at work. (#38)
54. be protected from the weather while I work. (#58)

Cultural Identity

55. live where people of my religion and race are accepted. (#19)
56. work where people of my ethnic origin have good job possibilities. (#39)
57. feel accepted at work as a member of my race or ethnic group. (#59)

Physical Prowess

58. work hard physically. (#20)
59. use powerful machines. (#40)
60. use my strength. (#60)

NOTE: Items are grouped by the values being measured. Each item's ordinal position in the scale is indicated in parentheses.

SEX–ROLE STEREOTYPING SUBSCALE

The statements listed below describe attitudes toward the role of women in society which different people have. Again, there are no right or wrong answers, only opinions. You are asked to express your feelings about each statement by rating how much you agree or disagree using a 7–point scale with ⓪ = "Strongly Agree" and ⑥ = "Strongly Disagree." Please indicate your opinion by marking the column on the answer sheet which corresponds to the alternative which best describes your personal attitude. Please respond to every item.

1. A man should fight when the woman he's with is insulted by another man.
2. It is acceptable for a woman to pay for the date.
3. A woman should be a virgin when she marries.
4. There is something wrong with a woman who doesn't want to marry and raise a family.
5. A wife should never contradict her husband in public.
6. It is better for a woman to use her feminine charm to get what she wants rather than ask for it outright.
7. It is acceptable for a woman to have a career, but marriage and family should come first.
8. It looks worse for a woman to be drunk than for a man to be drunk.
9. There is nothing wrong with a woman going to a bar alone.

RAPE MYTH SCALE

The statements listed below describe attitudes toward the role of women in society which different people have. Again, there are no right or wrong answers, only opinions. You are asked to express your feelings about each statement by rating each question using a 7–point scale with ⓪ = "Strongly Agree" and ⑥ = "Strongly Disagree."

1. When women talk and act sexy, they are inviting rape.
2. When a woman is raped, she usually did something careless to put herself in that situation.
3. Any woman who teases a man sexually and doesn't finish what she started realistically deserves anything she gets.
4. Many rapes happen because women lead men on.
5. Men don't usually intend to force sex on a woman, but sometimes they get too sexually carried away.
6. In some rape cases, the woman actually wanted it to happen.
7. Even though the woman may call it rape, she probably enjoyed it.
8. If a woman doesn't physically fight back, you can't really say that it was a rape.
9. A rape probably didn't happen if the woman has no bruises or marks.
10. When a woman allows petting to get to a certain point, she is implicitly agreeing to have sex.
11. If a woman is raped, often it's because she didn't say "no" clearly enough.
12. Women tend to exaggerate how much rape affects them.
13. When men rape, it is because of their strong desire for sex.
14. It is just part of human nature for men to take sex from women who let their guard down.
15. A rapist is more likely to be Black or Hispanic than White.
16. In any rape case, one would have to question whether the victim is promiscuous or has a bad reputation.
17. Rape mainly occurs on the "bad" side of town.
18. Many so–called rape victims are actually women who had sex and "changed their minds" afterwards.
19. If a husband pays all the bills, he has the right to sex with his wife whenever he wants.

SEXUAL EXPERIENCES SURVEY

The questions listed below describe behaviors that may occur in the context of dating relationships or between persons who do not know each other very well. You are asked to indicate how often you have engaged in the following behaviors with another person using a 7–point scale with ⓪ = "Never" and ⑥ = "Often." Please respond to every item.

Have you ever:

1. Had sexual intercourse with another person when you both wanted to?

2. Had another person misinterpret the level of sexual intimacy you desired?

3. Been in a situation where you became so sexually aroused that you could not stop yourself even though the other person didn't want to have sexual intercourse?

4. Had sexual intercourse with another person even though he or she didn't really want to because you threatened to end your relationship otherwise?

5. Had sexual intercourse with another person when he or she didn't really want to because he or she felt pressured by your continual arguments?

6. Obtained sexual intercourse by saying things you didn't really mean?

7. Been in a situation where you used some degree of physical force (twisting his or her arm, holding him or her down, etc.) to try to make another person engage in kissing or petting when he or she didn't want to?

8. Been in a situation where you tried to get sexual intercourse with another person when he or she didn't want to by threatening to use physical force (twisting his or her arm, holding him or her down, etc.) if he or she didn't cooperate, but for various reasons sexual intercourse did not occur?

9. Been in a situation where you used some degree of physical force (twisting his or her arm, holding him or her down, etc.) to try to get another person to have sexual intercourse with you when he or she didn't want to, but for various reasons sexual intercourse did not occur?

10. Had sexual intercourse with another person when he or she didn't want to because you threatened to use physical force (twisting his or her arm, holding him or her down, etc.) if he or she didn't cooperate?

11. Had sexual intercourse with another person when he or she didn't want to because you used some degree of physical force (twisting his or her arm, holding him or her down, etc.)?

12. Been in a situation where you obtained sexual acts with another person such as anal or oral intercourse when he or she didn't want to by using threats or physical force (twisting his or her arm, holding him or her down, etc.)?

13. Been raped?

SUBSTANCE ABUSE ATTITUDES SCALE

The questions listed below describe attitudes toward the use of alcohol, tobacco and other drugs in society which different people have. There are no right or wrong answers, only opinions. You are asked to express your feelings about each statement by rating how much you agree or disagree using a 7–point scale with ⓪ = "Strongly Agree" and ⑥ = "Strongly Disagree." Please indicate your opinion by marking the column on the answer sheet which corresponds to the alternative which best describes your personal attitude. Please respond to every item.

1. Marijuana should be legalized.
2. Personal use of drugs should be legal in the confines of one's own home.
3. Daily use of one marijuana cigarette is not necessarily harmful.
4. Weekend users of drugs will progress to drug abuse.
5. Any drug can be safely used by a person who is mentally healthy.
6. It can be normal for a teenager to experiment with drugs.
7. Alcohol is an effective social relaxant.
8. The laws governing the use of marijuana and heroin should be the same.
9. Tobacco smoking should be allowed in high schools.
10. Persons convicted of the sale of illicit drugs should not be eligible for parole.

ATTITUDES TOWARD SUBSTANCES SCALE

The questions listed below describe attitudes toward the use of alcohol, tobacco and other drugs in society which different people have. There are no right or wrong answers, only opinions. You are asked to express your feelings about each statement by rating how much you agree or disagree using a 7–point scale with ⓪ = "Strongly Agree" and ⑥ = "Strongly Disagree." Please indicate your opinion by marking the column on the answer sheet which corresponds to the alternative which best describes your personal attitude. Please respond to every item.

1. The use of tobacco should not be regulated or restricted in any way.
2. The use of alcohol should not be regulated or restricted in any way.
3. The use of marijuana should not be regulated or restricted in any way.
4. The use of hallucinogens such as LSD, mushrooms, or PCP should not be regulated or restricted in any way.
5. The use of "designer" drugs such as Ecstasy should not be regulated or restricted in any way.
6. The use of prescription drugs without a prescription should not be regulated or restricted in any way.
7. The use of "uppers" or amphetamines should not be regulated or restricted in any way.
8. The use of "downers" or depressants (other than alcohol) should not be regulated or restricted in any way.
9. The use of cocaine or cocaine derivatives should not be regulated or restricted in any way.
10. The use of heroin should not be regulated or restricted in any way.

APPENDIX H

SUBSTANCE USE SCALE

The questions listed below ask how often you **currently** use alcohol, tobacco and other drugs, based on your use of these substances in the past month. Please indicate how often you currently use the following substances using a 7–point scale with ⓪ = "Never" and ⑥ = "Several times daily." Remember, your responses are entirely confidential, so please respond to each item honestly.

1. How often do you use tobacco?
2. How often do you use alcohol?
3. How often do you use marijuana?
4. How often do you use hallucinogens such as LSD, mushrooms, or PCP?
5. How often do you use "designer" drugs such as Ecstasy?
6. How often do you use prescription drugs without a prescription?
7. How often do you use "uppers" or amphetamines?
8. How often do you use "downers" or depressants (other than alcohol)?
9. How often do you use cocaine or cocaine derivatives?
10. How often do you use narcotics including heroin?

The questions listed below ask you to choose between two statements that describe possible feelings and opinions which different people have. There are no right or wrong answers, only opinions. You are asked to express your feelings about each statement by indicating which of the two statements best describes you. Please indicate your opinion by marking the column on the answer sheet which corresponds to the alternative which best describes your personal attitude. Please respond to every item.

1. ⓪ I can't wait to get into the indoors on a cold day.
   ① I am invigorated by a brisk, cold day.
2. ⓪ I would like to hitchhike across the country.
   ① Hitchhiking is too dangerous a way to travel.
3. ⓪ I would like to go water–skiing.
   ① I would not like to go water–skiing.
4. ⓪ I can't stand watching a movie that I've seen before.
   ① There are some movies I enjoy seeing a second or even a third time.
5. ⓪ I would not like to learn to fly an airplane.
   ① I would like to learn to fly an airplane.
6. ⓪ A person should have some sexual experience before marriage.
   ① It is better if two married persons begin their sexual experience with each other.
7. ⓪ There is altogether too much portrayal of sex in movies.
   ① I enjoy watching many of the "sexy" scenes in movies.
8. ⓪ People who ride motorcycles must have some kind of an unconscious need to hurt themselves.
   ① I would like to drive or ride a motorcycle.
9. ⓪ I would like to go scuba diving.
   ① I prefer the surface of the water to the depths.
10. ⓪ I enjoy spending time in the familial surroundings of home.
    ① I get very restless if I have to stay around home for any length of time.

APPENDIX J
DEMOGRAPHIC QUESTIONNAIRE

The questions listed below ask about your age, race, gender and other demographic information. Please respond to these items by marking the column on the answer sheet which corresponds to the alternative which best describes you. Please respond to every item.

1. Age:

⓪ 17 or younger   ⑤ 22
① 18   ⑥ 23
② 19   ⑦ 24
③ 20   ⑧ 25
④ 21   ⑨ 26 or older

2. Academic classification:

⓪ Freshman   ③ Senior
① Sophomore   ④ Post–Bac
② Junior   ⑤ Graduate school

3. Fraternity or sorority membership:

⓪ Fraternity   ② No affiliation
① Sorority

4. Gender:

⓪ Male   ① Female

5. Race:

⓪ White/Caucasian   ③ Asian
① Black/African American ④ Other
② Hispanic

6. What kind of work does your *father* do, or would he do if working?

⓪ Professional and managerial   ③ Semi– or unskilled
① Clerical and sales   ④ Does not apply
② Skilled

7. What kind of work does your *mother* do, or would she do if working?

⓪ Professional and managerial   ③ Semi– or unskilled
① Clerical and sales   ④ Does not apply
② Skilled

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8. High school:
- ⓪ Public
- ① Private
- ② Both

9. Cultural Background:
- ⓪ Rural
- ① Suburban
- ② Urban
- ③ Rural and Suburban
- ④ Rural and Urban
- ⑤ Urban and Suburban

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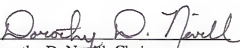
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BIOGRAPHICAL SKETCH

Steven John Kruse was born in Asland, Wisconsin, on June 13, 1968. After graduating from Plant City High School in 1986, he attended Florida Southern College in Lakeland, Florida. Steven received the degree of Bachelor of Science from Florida Southern College in December, 1989, with highest honors in his major field of psychology and minors in English and chemistry. In August, 1991, he entered the counseling psychology Ph.D. program at the University of Florida and received his Master of Science degree in August of 1994. He completed his predoctoral internship at the Washington State University Counseling Center in Pullman, WA, in 1996–97.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Dorothy D. Nevill, Chairman
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.
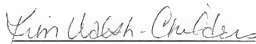
Martin Heesacker
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Shae Graham–Kosch
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.*

Robert C. Ziller
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Kim Walsh–Childers
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This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December, 1997

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